

# American Artisan

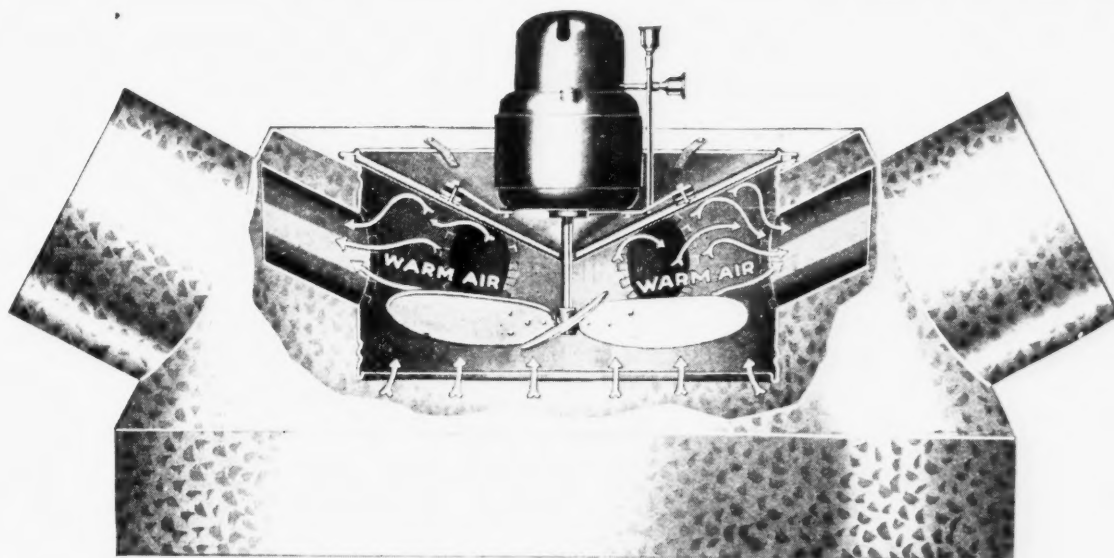
Founded 1880

The Warm Air Heating and Sheet Metal Journal

Vol. 97, No. 8

CHICAGO, FEBRUARY 23, 1929

\$2.00 Per Year



## ROBINSON Heat Distributor

**I**T will pay you to give some serious thought to the fan question and the *ROBINSON Heat Distributor* in particular.

Right now is the time when you can interest your customers in *proper distribution of heat throughout the home*—right now is the time when some particular room needs favoring.

The *ROBINSON Heat Distributor* forces air to the rooms that need it (see illustration) and in the amount desired.

If you desire *extra profits*—better satisfied customers and a sales producer arrange now with any of the firms listed below for the sale of the *ROBINSON Heat Distributor* in your territory.

Full mechanical details, prices and complete sales information from any of the jobbers listed, or—

**The A. H. ROBINSON COMPANY—MASSILLON, OHIO**

*Sold to the trade by these reliable firms*

BAKER-PAYNE-VOYE CO., Boston, Mass.  
THE BECKWITH CO., Dowagiac, Mich.  
CARR SUPPLY CO., Chicago, Ill.  
DAYTON-HESSLER CO., Syracuse, N. Y.  
DEMMLER BROS. CO., Pittsburgh, Pa.  
FARRIS FURNACE CO., Springfield, Ill.  
C. L. FEATHERSTONE FURNACE CO., Spokane, Wash.  
FOLANSBEE BROTHERS CO., Pittsburgh, Pa.  
Pittsburgh, Rochester, Cincinnati, Memphis, Indianapolis, Milwaukee, Louisville.  
FLORAL CITY HEATER CO., Monroe, Michigan  
FOX FURNACE CO., Elyria, Ohio  
HEATING AND SUPPLY CO., Pittsburgh, Pa.

HENRY FURNACE & FOUNDRY CO., Cleveland, O.; Indianapolis, Ind.; Pittsburgh, Pa.  
M. R. HOKE, Manheim, Pa.  
HOMER FURNACE CO., Coldwater, Mich.  
IDEAL FURNACE CO., Detroit, Mich.  
W. E. LAMNECK CO., Columbus, Ohio  
LENNON FURNACE CO., Inc., Syracuse, N. Y.  
LENNON FURNACE CO. OF CANADA, LIMITED, Toronto, Ontario and Winnipeg, Manitoba.  
THE MAJESTIC COMPANY, Huntington, Ind.  
MARSHALLTOWN HEATER CO., Marshalltown, Iowa  
MAY-FIEBEGGER CO., Newark, O.; Akron, O.  
MONCRIEF FURNACE CO., Atlanta, Ga.

NEW IDEA FURNACES, LTD., Ingersoll, Ont., Can.  
J. M. & L. A. OSBORN CO., Cleveland, O.; Buffalo, N. Y.  
PEASE FOUNDRY CO., Ltd., Toronto, Ontario, Canada  
PENINSULAR STOVE CO., Detroit, Mich.  
PHOENIX SUPPLY CO., Birmingham, Ala.  
PORTLAND STOVE FOUNDRY CO., Portland, Maine  
RICHARDSON & ROYNTON CO., New York, Chicago, Boston, Philadelphia, Buffalo, Minneapolis, Newark, N. J.  
THE SCHILL BROS. CO., Crestline, O.  
WESTERN STEEL PRODUCTS CO., Duluth, Minn.  
WISE FURNACE CO., Akron, Ohio

# Introducing — HOMER HARMONY NEWS

A bi-monthly magazine for furnace dealers. Edited and published by The Homer Furnace Company, but written by Homer Dealers and Salesmen. A practical business aid.



Full of stimulating sales suggestions and helps contributed by successful agents from personal experiences. Every furnace man needs it. Ask to have your name put on our mailing list.



"HOMER 'ACE'"



HOMER "GRAND"

**H**OW does he do it? The dealer whose profits under similar conditions year after year just exceed yours—how does he get that extra volume?

Here is your chance to find out. He is going to tell in Homer Harmony News. Each issue of this new publication will contain stories of how other furnace dealers put it over, written by themselves. They will be mighty interesting "Confessions" to wide-awake furnace men. And we will be glad to put your name on our mailing list whether you sell Homer heating plants or some other furnace.

Homer agents from all over the country report that 1928 was a year of good business for them. This year promises to be even more prosperous. One of the big reasons for their success is the backing they get from The Homer Furnace Co. Homer Harmony News is only the latest expression of this helpfulness. Our engineering department is always ready to solve installation problems. Our sales portfolio and direct mail advertising help tell the sales story. At every point Homer gives co-operation. And the Homer line of furnaces has proved its merits and salability. If you have not signed a contract for 1929, investigate

HOMER—THE COMPLETE AGENCY

*Plan with us for a Greater, more Profitable Business*

**HOMER FURNACE CO., Coldwater, Michigan, U. S. A.**

Capacity over  
30,000 Furnaces  
Annually

*"What's home  
without a Homer"*

There's Harmony  
in Homer Heated  
Homes

THE **18 POINT** SERIES

**POINT NO. III**

**ROTARY GRATE**

HERE is an exclusive Midland TRUESTEEL Feature!

A Flat Rotary Grate, which gives a side to side motion, saving fuel, and giving easy operation at all times.

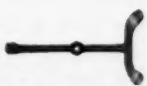
This grate is built for a lifetime. Has no bolts, cog wheels, pins or screws, and can be removed and replaced in the twinkling of an eye. This is one of the greatest of advancements in Warm Air furnace construction . . .

And is another reason for the Midland TRUESTEEL superiority.

This is only one of the TRUESTEEL 18 superior features!



FOUR PARTS—NO BOLTS—NUTS—PINS OR SCREWS



TRIPOD



OUTER GRATE



INNER GRATE



HORSESHOE LOCK

WHEN we say "Know this furnace by its 18 Superior Points" it is an invitation to know the "Cleaner Heat" furnace.

It is also an invitation to become the Leading Furnace Installer in your territory. The TRUESTEEL Franchise is open to you! It means Bigger, Better Profits—More Satisfied Customers—and the Selling Co-operation of a \$750,000 organization.

Write today for full information. Act now and become the Leading Furnace Man in your territory.

THE MIDLAND FURNACE CO.  
COLUMBUS, OHIO



\*The TRUESTEEL is manufactured, in quantity, in our new, up-to-the-minute Quarter Million Dollar Plant.

ANOTHER POINT  
MARCH 9th  
WATCH THIS PAGE

THE NEW  
TRUESTEEL  
CATALOG IS READY  
WRITE FOR IT!

**MIDLAND FURNACES**

**ALL STEEL** ♦♦♦

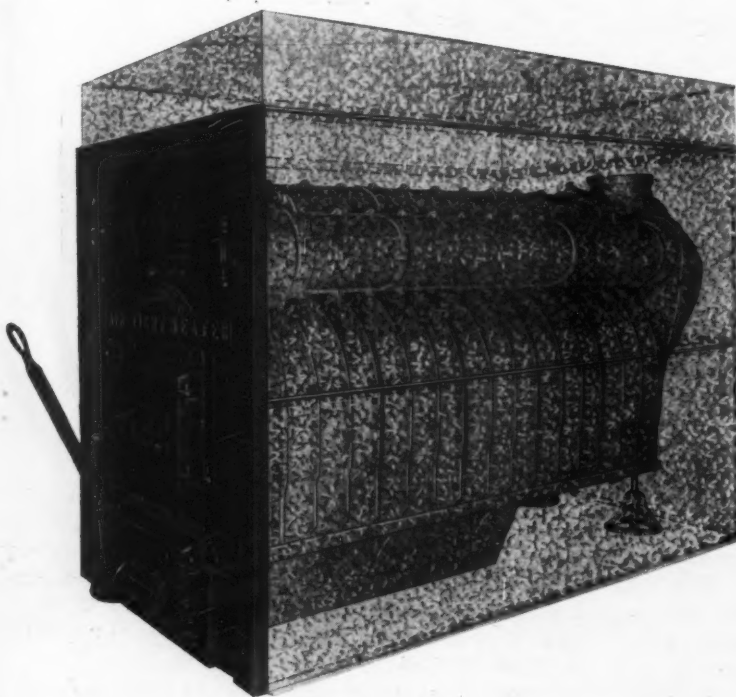


**CLEANER HEAT**



**—the new**  
**improved AIRTIGHT**  
*Developed for the*  
**Modern**  
*Heating and Ventilating*  
**System**

*The AIRTIGHT is ideal for the Small School and Church Building.*



**T**HE New Improved Airtight Heater is also especially adapted to heating country clubs, lodges, and larger homes.

The heater shown here is but one in a complete line. We'll gladly show you a few of the many installations where modern Heating and Ventilating Systems are producing new standards of comfort and efficiency. There's a size for every purpose.

### Construction

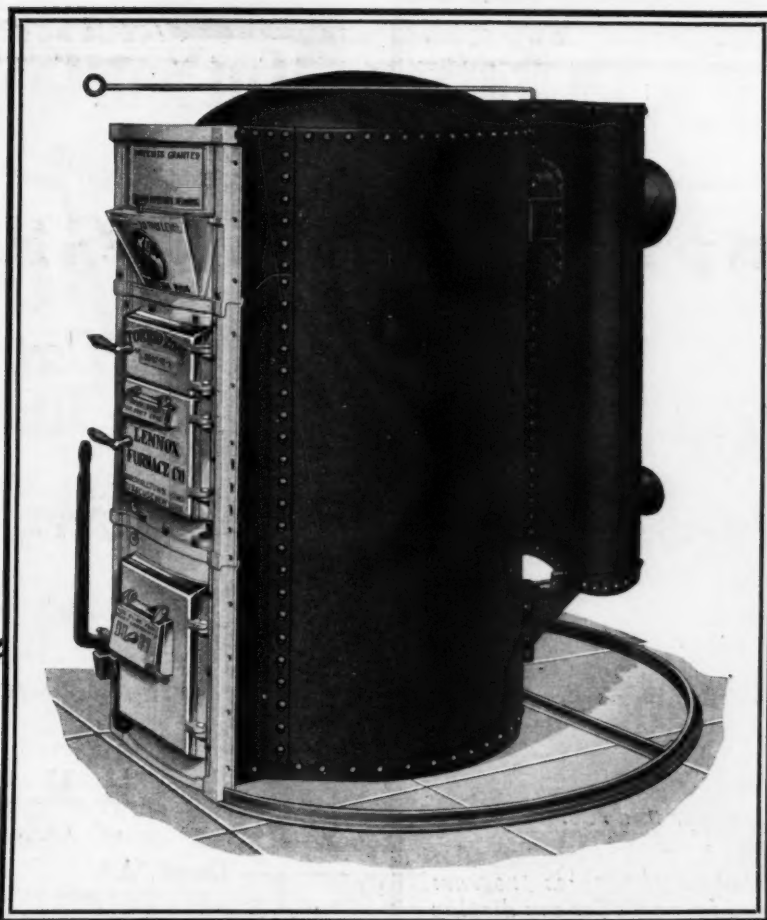
Airtight heaters of Horizontal design are cast iron throughout. The fire box sides are corrugated, with exterior extending flanges for increased strength and radiating surface. These sides are protected by smoke burning linings. The Radiating surface is correctly proportioned to the grate surface. Either stationary or rocking type grates are furnished. Wood, coal, gas, or oil fuel can be used with equally excellent results.

Airtight Heaters are moderate in price. You should investigate thoroughly.

**DEALERS:** Write Sales Dept. A for complete, detailed information.

**P.H. MaGirl Foundry & Furnace**  
**Works**  
 BLOOMINGTON ILLINOIS





## Torridd Zone Riveted Gas Tight Construction Meets Public Demand

**L**AST June a hardware dealer in a small town of 490 people in North Dakota, wrote to us asking for complete information about the gas tight features to be found in TORRID ZONE furnaces. His letter indicated that his customers were demanding warm air heating plants that would keep smoke and fuel gases out of their homes.

The inquiry was turned over to our traveling engineer in that territory who immediately visited the dealer and together the dealer and our engineer called on the prospects, of which there were ten. The gas tight features and the fuel economy that could be expected from TORRID ZONE furnaces were explained to them and the result was that all ten were sold TORRID

ZONE heating plants. These prospects could readily grasp the superior features in TORRID ZONE construction that are not found in ordinary furnaces.

TORRID ZONE dealers may not always sell 100% of their prospects as this North Dakota dealer did, but the fact remains that the public wants and demands the best in warm air heating plants which can be supplied if you have the Lennox agency for your territory.

Your inquiries will be given prompt attention.

1929 TORRID ZONE furnaces are now in production, having 22% more effective radiating surface in the body and 15% larger radiators.

**LENNOX FURNACE COMPANY, INC.**  
 Marshalltown, Iowa      Syracuse, New York

*In Canada*  
**LENNOX FURNACE COMPANY OF CANADA, LTD.**  
 Toronto

# CALORIC

## WHAT THEY SAY

A few statements taken from Dealer's letters since we came into possession of this line—

♦ ♦ ♦  
*"We have always done a nice business in Calorics in this territory have about 1800 in use."*

♦ ♦ ♦  
*"I am glad to hear you have taken over Caloric Line, they are a good furnace and gave complete satisfaction in my territory."*

♦ ♦ ♦  
*"We are taking it for granted you will continue us as Caloric dealers as our foundation of nearly 2000 Caloric users will evidently line up with your policies."*

♦ ♦ ♦  
*"We have been selling Calorics for the past 12 years and will continue to do so."*

♦ ♦ ♦  
*"I am very interested in your sales program and want to get some furnaces for my display floor."*

♦ ♦ ♦  
*"We have been very loyal to the Caloric and have sold hundreds of them."*

♦ ♦ ♦  
*"We have been well satisfied with the line and would like to continue as jobbers in this territory."*

♦ ♦ ♦  
*"We were interested to learn of your purchase of Caloric line and find it easier to sell a furnace that is well known."*

♦ ♦ ♦  
*"I have been handling the line for many years and would like to represent you in the following counties."*

DO CALORIC DEALERS STICK?  
 I'LL SAY THEY DO.

Repairs for All Old Models

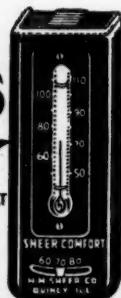
MONITOR-CALORIC DIVISION  
**MARSHALL FURNACE CO.**  
 MARSHALL, MICHIGAN

# CALORIC

## Cut Your Coal Bills

with

THERMOSTAT  
IN ROOM



## "SHEER COMFORT"

Automatic Electric

## HEAT CONTROL

REGULATOR  
ON YOUR  
FURNACE



Dealer's Price  
Only

# \$17<sup>55</sup>

Write  
or  
Wire

## H. M. SHEER CO.

Quincy, Illinois

Dept. AA

Established 1888

## QUALITY

Established



## SERVICE

1902

# CHICAGO

## FURNACE PIPE AND FITTINGS

THE well known pipe that is used by the most progressive warm air heating contractors because its quality and construction enable better and quicker installation. Try it and see—ask about our new Self-Locking double stack.

Write for our illustrated Catalog No. 21 covering  
Furnace Pipe and Furnace Supplies.

**CHICAGO FURNACE SUPPLY CO.**

1276-78-80-82 Clybourn Ave.

CHICAGO

## "American Seal"

## FURNACE CEMENT

Roof Cement — Stove Putty  
Plumbers Putty

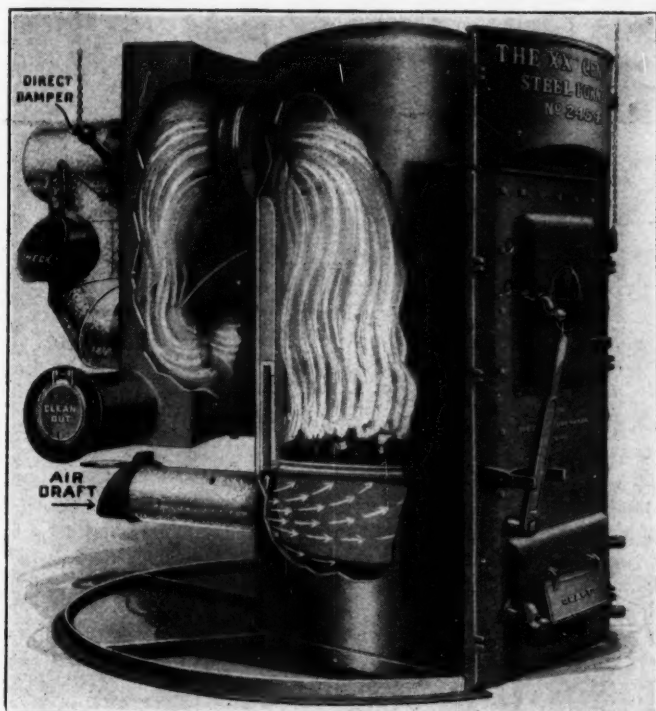
PAINTS and SPECIALTIES

**WILLIAM CONNORS PAINT MFG. CO.**  
TROY

Established 1852  
JAMES L. PERKINS  
Western Distributor

NEW YORK

140 S. Dearborn St., Chicago, Ill.



## XXth CENTURY the most improved steel furnace on the market

**N**OWHERE will you find more value for the money, a more efficient heating unit than the 1929 XXth Century Steel Furnace.

By its hot blast system the XXth Century Steel Furnace gets the heat from the coal gases as well as from the coal.

Its all-welded, copper steel drum gives it extra long life. Each drum is 58" high. This allows extra room for mixture and expansion of gases and causes greater heat radiation.

We wish that space permitted us to tell you about each improved feature of this extra fine furnace. It surely is another strong link in the XXth Century line of money makers. Write today for complete facts and the 1929 XXth Century dealer proposition.

**The XXth Century H. & V. Co.**  
Akron, Ohio

## FLORENCE

...a real HOT BLAST!



(Arrows in above picture show direction of heat)

**T**HE Florence Hot Blast Furnace embodies the same patented principle of combustion as the famous Florence Hot Blast Heater—recognized **everywhere** and **ever so long** as the **best** ever developed. It is the only coal furnace that can be positively controlled to any degree of heat. Operates best on **cheap** grade slack or lump coal. The Florence Furnace burns the smoke and soot—nothing is wasted. The only furnace that will **maintain even** temperature without the use of a thermostat.

Will you be among the first to profit by this new necessity—will you be visionary, alert to the profit and business building possibilities of Florence Hot Blast Furnaces?

Use the coupon below. Let us give you full particulars about our liberal proposition. The great resources and judgment of this great institution are squarely behind you. The way is now open to prosperity and prestige. Sign and mail the coupon NOW.

### C. EMRICH COMPANY

Founded in 1861

COLUMBUS, OHIO

Manufacturers also of the famous Supreme  
Florence Heater and Florence Stove

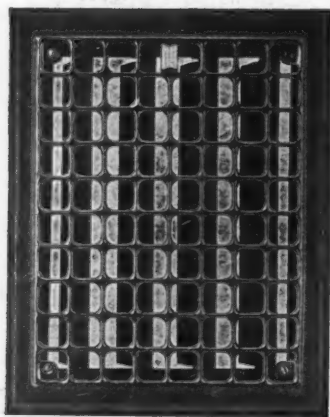
MAIL THIS COUPON for COMPLETE DETAILS

NAME .....  
ADDRESS .....  
CITY .....  
STATE .....

AA 2-23-29



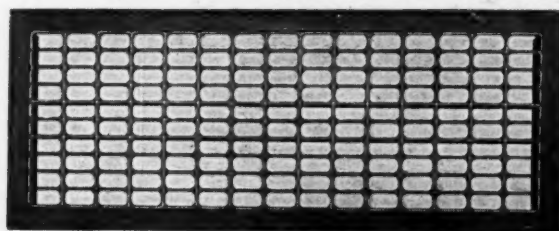
# NOW is the Time to Place Your Register Order



No. 200. Floor Register

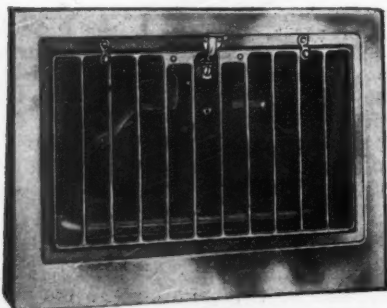
WITH patented pinched-back fretwork which affords a register unequalled in strength and free air opening. The use of finest steel means finishes of enduring beauty.

If you haven't a Loose Leaf Catalog No. 28, write for it.



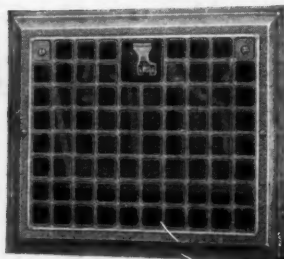
No. 255. Steel Cold Air Face

HAS oblong holes to increase flow of return air to furnace. A 14x30 has free opening equal to 20x30 wood grille. 11 popular sizes from 12x14 to 24x30. Especially popular in oak finish.



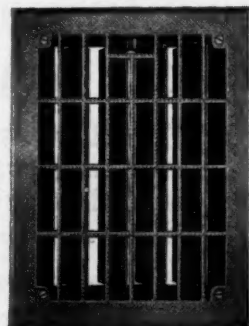
No. 170. Baseboard Register

WITH quickly detachable face. Formed-bar design gives greatest possible free face area consistent with protection of opening and beauty of design. Size 8x12 has 78 sq. in. actual free face opening.



No. 340. Sidewall Register

CONVEX face adds to the strength and beauty, and serves to cover any irregularities of plaster close to opening.



No. 270. Pebble Register.

CAST Iron Face—steel body. Standard sizes stocked in LAS (Lacquered Dull Bronze) and Black Japan finishes. This, with No. 280 Pebble Cast Iron Cold Air Face, is a regular part of the H&C Line.

THE HART & COOLEY MFG. CO., NEW BRITAIN, CONN.

Manufacturers of Registers, Cast and Wrought Grilles and Radiator Enclosures

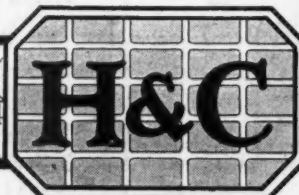
New York: 101 Park Ave.

Chicago: 61 West Kinzie St.

Philadelphia: 1600 Arch St.

A representative stock of all standard items is carried at our Chicago Warehouse

WROUGHT  
STEEL



WARM AIR  
REGISTERS

"The Air Capacity Line"

When writing mention AMERICAN ARTISAN—Thank you!

# BOOMER

— that different  
and better

## STEEL FURNACE

WITH the demand for steel air-tight furnace construction the demand for the Boomer has grown.

It has all the usual qualities of high grade steel furnace design and construction *plus the greatly increased radiating surface of three large cast radiating flues.*

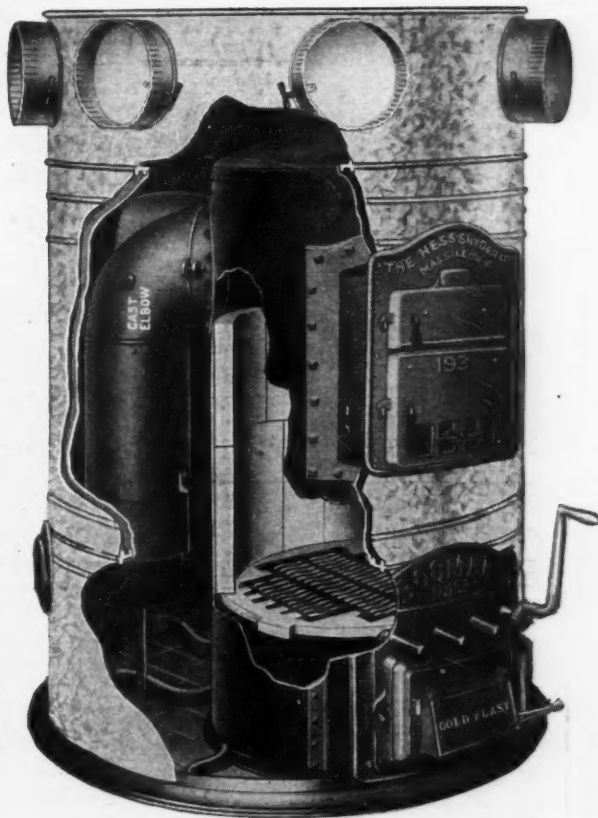
Because of this exclusive Boomer design it is Soot, Gas and Smoke consuming, making it more efficient and durable.

With the Boomer Steel Furnace your customers are assured of clean heating because of the scientific design of the radiating flues. The proportions cause even temperatures below the point which usually causes great expansion and contraction of cast iron.

It is the ideal furnace for high grade installation at a price that is favorable to customers.

Boomer dealers are having large profitable Boomer Steel Furnace sales.

Write for the BOOMER catalog today



# THE HESS-SNYDER CO.-MASSILLON, OHIO.

## BOLTS

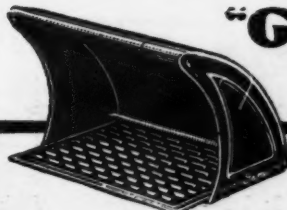
WE MANUFACTURE A COMPLETE LINE OF BOLT PRODUCTS, INCLUDING STOVE BOLTS, CARRIAGE BOLTS, MACHINE BOLTS, LAG BOLTS, NUTS, COTTER PINS, ETC. ALSO STOVE RODS, SMALL RIVETS AND HINGE PINS. CATALOG ON REQUEST.

THE LAMSON & SESSIONS CO.

THE KIRK-LATTY CO.

1971 W. 85th St. Cleveland, O.

## "GEM" ADJUSTABLE REGISTER SHIELDS



Have you shown "GEM" Adjustable Register Shields to all your customers who use warm air furnaces? They all need "GEMS." Two handsome finishes—oxidized copper or black. Retail at: "GEM" Floor Shield, black, \$1.25; Ox. Cop., \$1.50; "GEM" Wall Shield, black, 65c; Ox. Cop., 75c.



1140 BROADWAY NEW YORK, N.Y.

BUY FROM YOUR JOBBER.

## PATTERNS FOR STOVES AND HEATERS

THE CLEVELAND CASTINGS PATTERN COMPANY  
CLEVELAND, OHIO

## PATTERNS

FOR STOVES AND HEATERS FIRST-CLASS IN WOOD and IRON  
VEDDER PATTERN WORKS ESTABLISHED 1835 TROY, N. Y.

IRON AND WOOD

## STOVE PATTERNS

QUINCY PATTERN COMPANY  
QUINCY, ILLINOIS

## McILVAINE OIL BURNER

Listed by Underwriters

Adaptable to warm-air furnaces because the McILVAINE System of continuous flame insures no cracking or burning of fire pots, but produces even, dependable heat.

Not an Intermittent Burner

DEALERS: Write for information today.  
McILVAINE BURNER CORP., Dept. A, 747 Custer Ave., Evanston, Ill.

## RELIABLE

AMERICAN ARTISAN advertisers are reliable. Whether or not you are now in the market they are always glad to give you information regarding their products or services. Make sure of dealing with reliable concerns by doing business with AMERICAN ARTISAN advertisers. Look through the advertising pages—also refer to the BUYERS DIRECTORY.

Mention AMERICAN ARTISAN in your reply—Thank you!

Founded 1880

Published to Promote  
Better  
Warm Air Heating  
and  
Sheet Metal Work

# American Artisan

The Warm Air Heating and Sheet Metal Journal

Yearly Subscription  
Price:  
United States ..... \$2.00  
Canada ..... \$3.00  
Foreign ..... \$4.00

Published EVERY SATURDAY at 620 South Michigan Avenue, Chicago

## ADVERTISING AND EDITORIAL STAFF

Etta Cohn Franklin Butler G. J. Duerr  
J. F. Johnson Chas. E. Kennedy Frank McElwain

Eastern Representatives: M. M. Dwinell, J. S. Lovingham, 156 Fifth Avenue, New York City

Vol. 97, No. 8

CHICAGO, FEBRUARY 23, 1929

\$2.00 Per Year

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### PITY PROPERLY PLACED

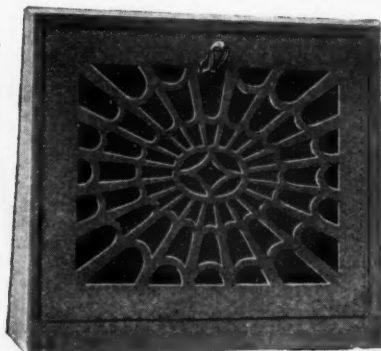
*I pity no man because he has to work. If he is worth his salt, he will work. I envy the man who has a work worth doing and does it well. There never has been devised, and there never will be devised, any law which will enable a man to succeed save by the exercise of those qualities which have always been the prerequisites of success—the qualities of hard work, of keen intelligence, of unflinching will.—THEODORE ROOSEVELT.*



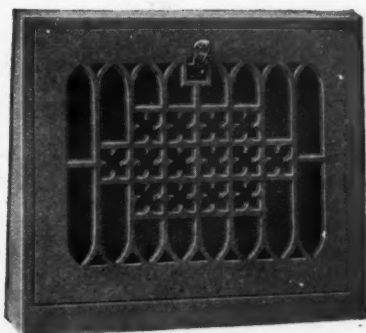
# TUTTLE & BAILEY SUPER-REGS

REGISTERED U. S. PATENT OFFICE

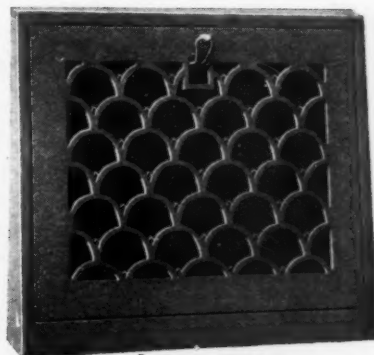
## NEW SUPER-REGS FOR 1929!



Colonial Design



Tudor Design



Classic Design

### Ferrocrafft Registers for Baseboard and Sidewall

**T**HIS is a new departure in register design. It is but a necessary step toward harmonizing the register with other modern home equipment. The fret-work is a **FERROCRAFT** Cast Grille, selected from the

Ferrocrafft Collection, which has won wide fame in the Architectural and Building fields. The two-piece construction with removable face is a cure for streaked walls and allows easy cleaning of duct. The same designs and construction are of-

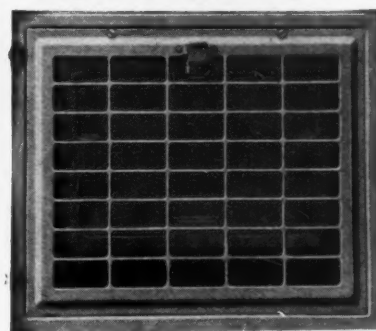
fered in both sidewall and baseboard Ferrocrafft Registers.

Modernize new and old furnace installations with these new, artistic developments in register design. Details of sizes, prices, etc., on request.

### Another New One for the Sidewall

**A** NEW non-streak two-piece Register for the sidewall. The first of its kind! Single valve; all steel. Made like a T&B Baseboard Register—allowing the same clean installation. The deep frames fit snugly into Stack-head. Stackhead edges can

be turned over on the Flange (border) just as in Style 902 T&B Baseboard Register. The Flange (border) can be stoutly fastened in one place, and screws are supplied. A good Register for good work—a remedy for unsightly walls.

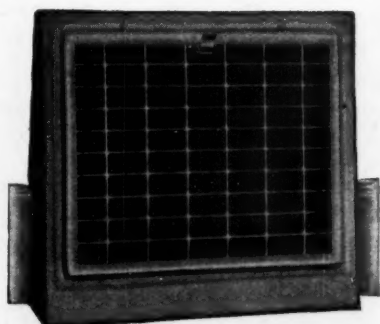


Style 302 Sidewall Register

### Tried and True SUPER-REGS

The T&B Line holds many old friends of the furnace man. He has known them for years as the kind of Registers that help to sell

more furnaces. Beautiful modern color finishes, strength, durability and mechanical perfection are outstanding features of Super-Regs.



Style 902 Baseboard Register



Style C "Cobble" Cold Air Face

## TUTTLE & BAILEY MFG CO.

Established 1846

Chicago

Boston

Kansas City

Bridgeburg, Ont.

441 Lexington Avenue, New York City

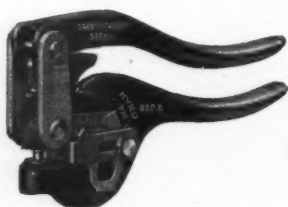
When writing mention AMERICAN ARTISAN—Thank you!

# HYRO SHEET METAL WORKERS' TOOLS AND DAMPER ACCESSORIES

Save Time and Labor

## HYRO METAL PUNCHES

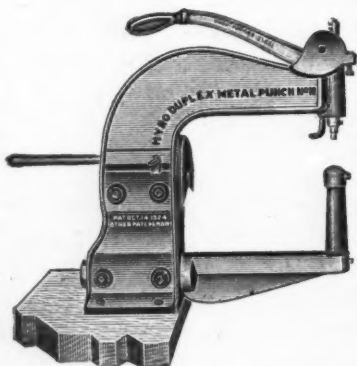
NO. O. X.



Patented  
December 9, 1919—No. 1,324,621  
June 6, 1922—No. 1,418,474

A small, powerful punch for 14-gauge and lighter. Measures 8" overall and weighs 2½ lbs.

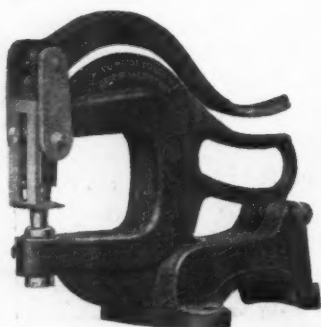
NO. 18 DUPLEX



Patented  
October 20, 1925—No. 1,558,289

The exceptionally deep throat accommodates intricate shapes, channels, wide sheets, pans, etc. Recommended for 14-gauge and lighter.

NO. X. X.



Patented  
April 4, 1922—No. 1,411,809

A combination bench and hand punch. Deep throat allows the punching of irregular and intricate shapes. Suitable for 14 gauge and lighter.

## HYRO "UNXLD" DAMPER QUADRANTS and DAMPER ACCESSORIES

### "UNXLD" DAMPER QUADRANTS



Patented  
Dec. 23, 1919  
No. 1,326,096

A neat, simple and efficient device for regulating dampers. Made in five sizes: ½", ¾", 1", 1½" and 2".

### DAMPER ROD CLIPS



Patented April 4, 1922,  
No. 1,411,745  
Offer a quick and easy means of fastening square rods to dampers. Made in five sizes, ½", ¾", 1", 1½" and 2".

### DAMPER BALL-BEARING BUSHINGS



Assures easy operation of heavy dampers. Made in four sizes, ½", ¾", 1" and 1½".

### DAMPER PLATES



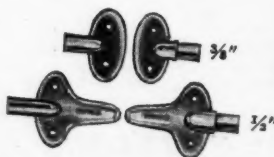
### DOOR HANDLES WITH TONGUES



### DOOR BUCKLES WITH TONGUES



### DAMPER BEARINGS



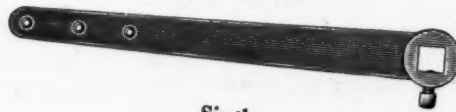
Used instead of rods on small and medium size dampers. Quickly attached. Made in two sizes, ¾" and 1".

### DIAL DAMPER REGULATORS



Patented  
Dec. 9, 1919  
No. 1,324,620  
Another practical and efficient device for regulating small and medium size dampers. Made in one size only, ¾".

### DAMPER LEVERS



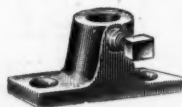
Single



Double

Single		Double	
Size	Length	Size	Length
1/2"	7"	1/2"	9"
5/8"	9"	5/8"	9"
3/4"	11"	3/4"	14"
7/8"	15"	7/8"	14"

### DAMPER AND DEFLECTOR CASTINGS



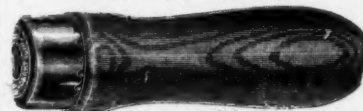
Damper



Deflector

Made in one size only, ¾" round hole.

### HYRO SHUR-GRIP SOLDER IRON HANDLES



Patented  
April 24, 1923—No. 1,453,082  
Screws on and stays on. Won't burn. Won't split. Holds Solder Iron rigid. Made in three sizes.

**HYRO MANUFACTURING CO., INC.**  
202 VARICK STREET . . . . . NEW YORK

Say you saw it in AMERICAN ARTISAN—Thank you!



# American Artisan

The Warm Air Heating and Sheet Metal Journal



Vol. 97

CHICAGO, FEBRUARY 23, 1929

No. 8

## Merchandising Merchandise Aids in Rapid Growth of Wisconsin Firm

### Find Farm Market for Warm Air Furnaces Still Virgin

By J. A. FITSCHEN, Sales Promotion Manager

ONE hundred and sixty-four hardware retailers went to Madison, Wisconsin, recently to attend the annual furnace and hardware display and convention of the Wisconsin Hardware Company. There was a 40 per cent increase in manufacturers' lines represented, and 46 per cent increase in retailer attendance over last year. All lines of merchandise displayed were distributed by the Wisconsin Hardware Company of Madison.

Forty manufacturers had booths in the ball room of the Park Hotel, displaying their complete lines of merchandise. In talking with these manufacturers' representatives they said that this hardware meeting displayed more enthusiasm and interest, and the dealers bought more merchandise than at any hardware convention they had ever attended.

President Glenn Frank, of the University of Wisconsin, gave a most instructive talk on "Chain Street versus Main Street." He told of the phenomenal growth of chain stores. He suggested that there should be "less anarchy and more cooperation among retailers."

#### Company Has Quick Growth

The Wisconsin Hardware Company is only three years old. They have had a phenomenal growth, as is indicated by the fact that they have already outgrown two warehouses, and December 1, 1928, they moved into their new modern location, which is their third warehouse.

The Wisconsin Hardware Company is not only selling merchandise, but they are merchandising merchandise.

Soon after the salesman, M. E. Ticen (XX Century Heating Co.), walked out of the office, the general manager said, "That man Ticen certainly has ideas, he should have been a merchandising man, instead of a salesman." The Sales Promotional Manager replied, "That's just why we sold so many furnaces this year. Ticen is a merchandising salesman, and that's the highest type of salesman on the road today."

After careful consideration and intensive study, the Wisconsin Hardware Company of Madison, selected for distribution the XXth Century Furnace line as its quality line, and also a price furnace line to place retailers in a position to meet mail order competition. This price furnace is made up special under the name "Wisco," which is the trade name for the Wisconsin Hardware Company.

#### Good Roads Make Quick Deliveries Easy

Madison, no doubt, is the logical distributing point for the southern half of Wisconsin. With wonderfully paved roads and well organized freight truck systems radiating in all directions from this city, quick economical service can be rendered retail hardware stores who do not desire to carry all sizes of furnaces in stock in their own store.

In aiding the retailers to sell

more furnaces the Wisco merchandiser was produced. This was a four page miniature newspaper giving full description and sales talks on the XXth Century hot blast, steel, Portage and Wisco furnaces. It also gave the retail selling price, without installation cost included. Every furnace retailer received a quantity of these circulars for distribution to potential furnace customers.

In analyzing the potential farm market in the natural trade area of Madison, Mr. Ticen says, "The farm market for furnaces is still virgin." A careful study revealed that six out of ten city homes in the city are heated with warm air, while in the rural section the trend is toward warm air furnaces.

Mr. Ticen forcefully brought out a point which every furnace retailer gives very little consideration, and that is the replacement business. "The average life of all American made furnaces is twelve years and six months. Just count your furnace heated homes, divide by twelve, and you have your yearly replacement figure."

Another very fine merchandising suggestion was made by Mr. Ticen. He believes that a sample furnace should not be displayed where the customer has to walk over boxes and hardware to see the furnace. He suggests setting aside a small section for adequately displaying a furnace and placing it in a room that gives the appearance of a cellar.



# Sheet Metal Man Has Opportunity for Extra Work in Metal Zinc

## *Radiator Covers Are a Potential Source of Business to Contractor*

By O. W. KOTHE, St. Louis Technical Institute

**T**HERE are several places in which the sheet metal worker can pick up quite a bit of side issue work—if he will only go after it. Some of these are more extended than others, but they all help to keep men on the job and silver dollars in the bank. For example, there are many comfort stations where zinc urinals can be made or where partitions separating stalls can be lined with zinc.

In much of this work nickel zinc is useful, much better than plain zinc or galvanized iron. The nickel zinc is easier to keep clean, and the film of nickel gives it increased life. So at "A" we show a gutter form of urinal supported with a  $\frac{3}{8}$  or  $\frac{1}{2}$  inch galvanized pipe. The braces are placed at intervals of every 3 feet, and the zinc is wrapped around it. These are also made in box shape, or octagon, or V-shape but the half round is the best to keep clean.

Partitions in many of these comfort stations are filthy dirty and decaying. What they need is a thorough cleansing and painting, and then to line them with nickel zinc, or some such other metal. Such lining can be applied as at B, seamed around the edges, and then laid over as at B". Often these partitions are not over 5 feet wide, so one sheet in width will do the job on each side.

There are also numerous other things that the sheet metal worker can make out of zinc for plumbing and sanitary work with as good effect as sheet lead. In exposed positions nickel zinc is far superior to sheet lead.

Another source of extra business is radiator shields as required for steam and hot water heating. With these systems the air circulates the

room, passing through the bottom of radiator and along the sides of columns, and so becomes heated. As this air circulates close to the floor it picks up fine dust, and this later clings to the wall and ceiling above the radiator.

Now, if a covering can be built over the top of radiator, as at "C," the flow of air is thrust out toward the center of the room before it strikes the ceiling. In this way some of the particles of dust have dropped to the floor again, since the velocity of flow is decreased.

Hence, numerous types of hoods have been designed, some this way, others that way. Our sketch "C" is arbitrary and shows the general scheme. The one condition is to hold the hood  $2\frac{1}{2}$  inches away from the radiator to permit free circulation of air. Braces can be installed similar as at "C" or "D," and the pattern made as at "E." A light tube should be inclosed in the roll, as the radiators are often used as leaning rails or shelves and so must be of sufficient strength.

Nickel zinc is a good metal for this work because it is easy to keep clean and will always look well. Another article is the hot water expansion tank "F" used for hot water heating, which also can be made of nickel zinc of a heavy quality. These tanks are generally placed in bath rooms and must therefore be painted. But the inside of the galvanized ones will rust in time. So these tanks made of this metal will be an ornament to a bathroom, as well as a service to the heating system.

In this way hundreds of articles can be found that the public requires, and it is the shop that goes after the work that is prosperous. The days have gone by where a person can cock his feet on the bench

and expect work to come in without lots of hard work called "Salesmanship."

### **H. J. Jackson Sells Business to L. F. Rammer, Dickens, Iowa**

The sheet metal and warm air heating business of H. J. Jackson, Rock Rapids, Iowa, has been sold to L. F. Rammer, Dickens, Iowa. Mr. Rammer has already taken charge of the business.

### **Old Guard Southern Hardware Salesmen to Meet at Edgewater Gulf Hotel, Biloxi, Miss.**

The following letter is from R. P. Boyd, Secretary-Treasurer:

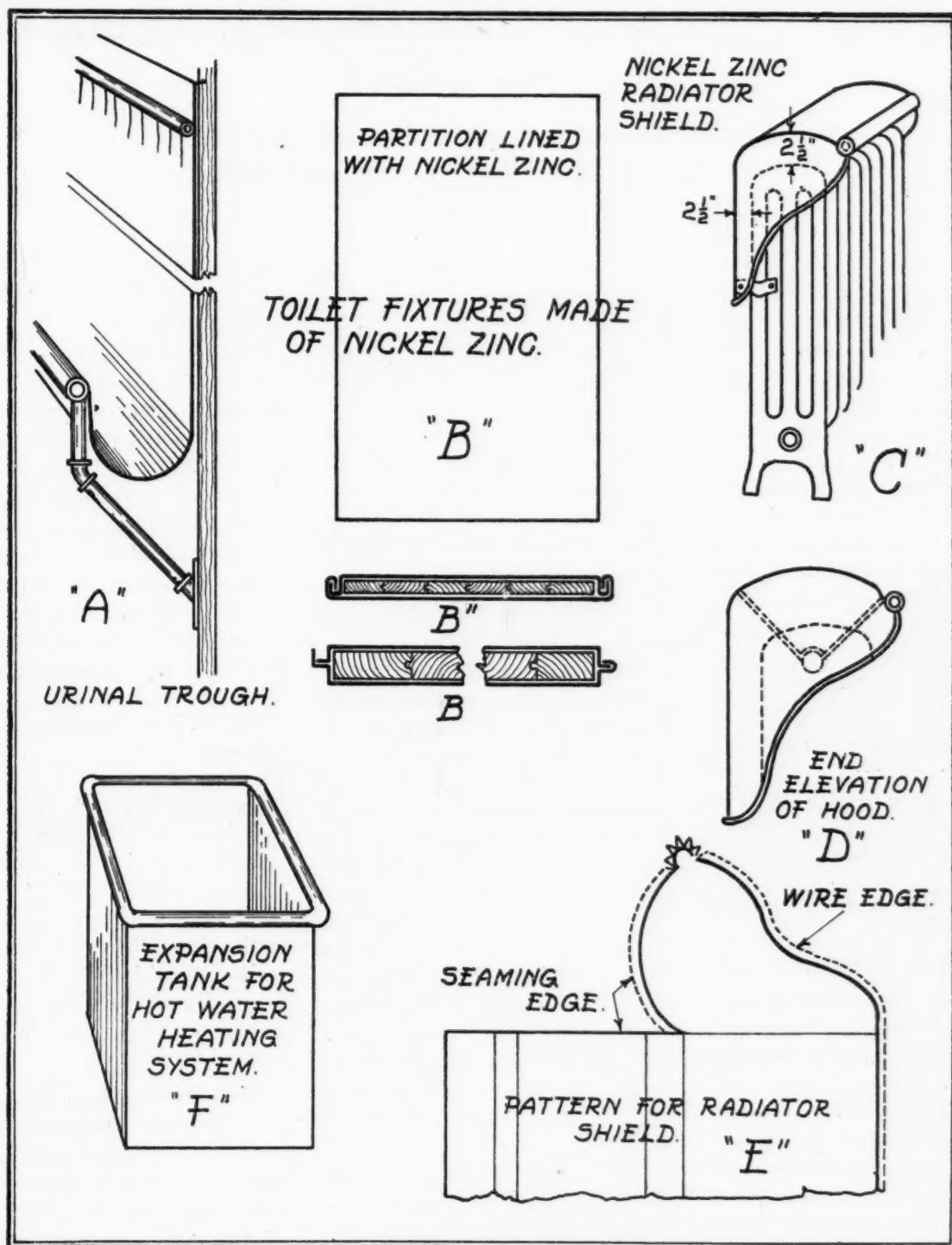
"We advised you last fall that the Southern Hardware Jobbers' convention would be held at the Edgewater Gulf Hotel, Biloxi, Miss., April 22nd to 26th. These dates have been confirmed.

"This will throw the Old Guard meeting to April 23rd, and a full attendance is urged. Make your reservations if you have not already done so. We will have an Old Guard dinner, details to be given later.

"George Harper has our deepest sympathy in his recent great bereavement. Mrs. Harper passed away following an attack of influenza.

"Fred Huggins has been transferred to Philadelphia, Pennsylvania, from Texas and will look after Lalance and Grosjean Manufacturing Company's business in that locality. He carries our best wishes in his new work. Texas' loss is Philadelphia's gain. His address is 109 Arch Street, Philadelphia, Pennsylvania, and when near give him a call.

"With sorrow I announce the



#### Details for Various Metal Zinc Work

**James A. Gilfoy to  
Represent Langenberg  
Manufacturing Co.**

James A. Gilfoy, residing at Bay City, Michigan, is now representing the Langenberg Manufacturing Co. throughout the entire state of Michigan.

Besides being personally acquainted with most of the trade in that state, Mr. Gilfoy is thoroughly sold on warm air heating and the Standard Code method of installing

furnaces, as all other Langenberg men are.

As is the case with all Front Rank representatives, Mr. Gilfoy is thoroughly schooled in the practical working of the Standard Code, as well as in fan heating. He is prepared to help all of our dealers with their estimating and installation problems, and of course, has the cooperation of our engineering department in designing unusual jobs, etc.

death in New Orleans of one of our most beloved jobbing friends, John McGraw. He was a prince, a general favorite with the older salesmen, who will be deeply grieved at his passing.

"We have an author in our membership, Howard Peak, who has written a book descriptive of his experiences when traveling in Texas in the early days. It will be interesting reading. Get a copy from Howard."

# *Advertising—What Is It?—How Does It Work and Why Is It Necessary?*

## *Advertiser Does Not Pay for Printers' Ink and Paper, But for an Effect on People's Minds*

By CLEM D. BROWN\*

**S**UCH NAMES as Shredded Wheat, Ivory Soap, Gold Medal Flour, Heinz 57 Varieties, Community Silver, Lucky Strike, Congoleum, Sunkist, Chevrolet and Coca Cola are familiar to almost every man, woman and child in the entire country.

Think of how many brands there are of breakfast foods, automobiles, automobile tires, soaps, cigarettes, shoes, hosiery, and of almost every other commodity you know about. How did you become familiar with them?

Then remember that almost every one is as well acquainted with names of hundreds of articles on the American market. Reflect for a moment on the commercial value of this common knowledge among a hundred million consumers, and you account for the immensities of the successes of most of these names with which you are familiar.

### **What Is Advertising?**

The power of advertising as a creator and developer of commerce is the predominating fact of modern distribution.

What is advertising?

Let me first illustrate it to you.

Assume that I just moved here. Walking down the streets of our business district, to me all stores would look alike and I could not distinguish in which one to buy the things which I needed for myself and family. The kind of merchandise sold would be apparent from the name and store front of many, but even then, not knowing what is behind the name and front, there would be few stores I would patronize without knowing some things about them.

If I wanted to buy Quaker oats, Baker's chocolate, or Jello, I could go in the first grocery store I came to and find these articles. If I wanted to buy Listerine or Williams shaving cream, I could go into the first drug store I came to with full assurance that they would have it. The power of advertising has created such a demand for certain brands that stores are compelled to carry those brands.

### **Advertising a Guide to Purchasing**

If, however, I wanted to purchase a suit of clothes, I certainly would not go into the first clothing store I came to. I would want to know a little about the quality, style and price of the clothing they sell and a little about the reputation of the firm, in case something was not right or the suit not stand up after I purchased it. How would I find out these things? By turning to the daily newspapers and reading the ads of those who sell men's clothing. If not in one issue, I could over a few days' period form such an accurate judgment of one or more clothing stores that I could not go wrong.

If I wanted furniture, I would not go into the first furniture store I saw. I would want to know much about their quality, size, terms and reputation. All that could be easily and quite accurately obtained from their newspaper advertising.

Now supposing that I discovered that the gutters and drain pipes on the house I had just purchased and moved into were badly leaking and needed replacement. I wouldn't turn into the first sheet metal shop I came to, for I probably wouldn't see one in the principle shopping district, and if I did see one, I would want to know about their responsibility

and reputation for good work before giving them my business. Turning to newspapers, what would I find? Probably nothing!

It is your duty to let me, the buying public, know where I can get the services that you alone can supply. Letting me know what you have to offer and where to get it—that is advertising.

The word advertising is derived from the Latin word "adverter"—to turn to. That's what advertising is—getting people to turn to the product or service that you have to offer. Advertising has also been called "Printed Salesmanship" and "the art of publicity," but it is more. The best definition I have seen is, "Advertising is a mode of education by which the knowledge of consumable goods is increased and an effective demand created." Mere announcement or giving of information is publicity, but not necessarily advertising in the modern sense. True advertising must ultimately produce business in an economical manner.

### **Advertising Must Produce Business Economically**

In the business world, advertising has been growing in importance for many years until it has become one of the most important factors in modern business. Addressing the convention of the International Advertisers Association, President Coolidge said, "It seems to me probable that of all our economic life the element on which we are inclined to place too low an estimate is advertising. When we come in contact with our great manufacturing plants, our extensive systems of transportation, our enormous breadth of agriculture, or the imposing structures of commerce and finance, we are forced to gain a cer-

\*Address delivered at the convention of the Master Sheet Metal Contractors' Association of Wisconsin, Milwaukee, Wisconsin, February 4, 1929.



tain impression by their very magnitude, even though we do not stop to consider their implications.

"By the very size and nature of their material form they make an appeal to the senses, even though their import does not reach the understanding. But as we turn the pages of the press and the periodicals, as we catch the flash of the billboards along the railroads and highways, all of which have become enormous vehicles of the advertising art, I doubt if we realize at all the impressive part that these displays are coming more and more to play in modern life."

Even the most casual observation, however, reveals to us that advertising has become a great business. Its total each year has placed it in the billion dollar class. Four hundred million alone is spent in periodical space—exclusive of local newspaper advertising.

#### **The Proof of the Pudding That Advertising Pays**

It was not uncommon a few years ago to hear men say that they wondered if advertising really paid. And that in the face of successes like Kodak, Uneeda biscuit, Campbell's soups, Palmolive soap, Atwater Kent, Simmons beds, Hoover cleaners, Gillette safety razors, and hundreds of others that owe their tremendous growth and prosperity largely to advertising. Why do Wrigley, Quaker Oats, Cream of Wheat, Del Monte, the automobile manufacturers, tire manufacturers, railroads, and hosts of others spend huge sums for advertising year after year? Only for one reason—Advertising Pays!

Last year Collier's ran a brilliant article by Roger W. Babson in which he pictured the vital part which national publicity plays in making America the most prosperous of nations. He called attention to the changes witnessed in recent years in the new attitude in judging credit, and said, "The bankers of the coming generation will hesitate to lend money to a business man who is not advertising, for they know he is probably due for a deficit. Likewise, investors will look

more and more keenly into the advertising policies of corporations whose bonds and stocks are offered for sale. Before you buy a security issued by any corporation, study not only its assets but its advertising. Other things being comparable, I prefer the bonds and stocks of the big national advertisers. This goes today and will be even more vital in the years ahead."

Another interesting fact is that the average price of all stocks in 1923 was a little over 60, and in 1928, 71. The average price, however, of a group of national advertisers was 71 in 1923, and that same group recently was 210!

It is peculiar that the average business man and intelligent, well informed woman knows so little about the advertising industry and what is behind the advertising of all sorts which is constantly before them. Not long ago a prominent member of Congress in addressing a group of newspaper men at the National Capital complimented them on the character and beautiful art work of the ads that are appearing in the newspapers of the country. And probably not a single ad had been prepared by the newspapers, for that is not a part of their business.

#### **Advertising Changes Attitude of Mind**

Basically, advertising is education. By changing their attitude of mind, it changes the material condition of the people. It is a most potent influence in changing the habits and modes of life, affecting what we eat, what we wear, and the work and play of the entire nation.

The advertiser doesn't pay for type and ink and paper. He pays for an effect in people's minds.

Monuments crumble, bridges fall, mountains are disrupted. Thought goes on forever.

It is hard for an advertiser to realize what it is he pays for. He writes a check for the five or six or eight thousand dollar page, and the page doesn't look to him as if it is worth thirty cents. It is hard to project the imagination into a mil-

lion homes and see the advertisement doing its work.

Today, advertising is the life of trade. In former days, goods were expected to sell themselves. When Ford brought out his first car there was practically no advertising to announce it, and a few months ago when his latest models were announced, newspapers, magazines, radio, printed matter, and special exhibits flooded the entire country at a cost of several millions of dollars. Last year we saw four page ads in one magazine which cost \$32,000 for the one issue, and we will soon see a twelve page ad—the largest and most expensive magazine ad ever run. Several times this last year new records were made in the newspaper field by the size and cost of space used by department stores.

When the Pompeian Company started to advertise, its total resources were only \$5,000, and within five or six years they were putting \$100,000 annually into advertising.

William Wrigley started with \$32 as his entire capital and now he is spending over \$10,000 every day for advertising.

Campbell's soups started advertising in 1898 with an appropriation of a little over \$4,000. Today their appropriation is over a million and a half.

We used to think lemons were only good for lemonade in hot weather, but now the lemon growers and packers enjoy an all year round market, for we have learned to use them as a flavoring for tea, melon, fish, meats, etc., as a garnishing, a cure for colds, a bleach for stained fingers, freckles, etc.

#### **How Advertising Changes and Directs Thought**

We used to think cranberries were only for Thanksgiving and Christmas, but we now enjoy them every month in the year and find them equally delicious with any kind of meat as well as turkey. And advertising has taught us of the vitamin, mineral, and iron content of foods.

Further, advertising is selling

service—filling station service, children's playgrounds in department stores, parking service, budget plan, wrap and mail package for shipment out of town, suburban delivery, free estimating and suggestions for home furnishings. Banks advertise how to invest and save. Grocers advertise recipes and demonstrate new foods and new ways of preparing and serving old ones. Paint people demonstrate the use of lacquer and create new business not only for themselves but also new business of considerable size in unfinished furniture for furniture manufacturers.

Well, what has all this got to do with the sheet metal business? Perhaps your business does not lend itself as effectively to advertising as foodstuffs, tobacco, or tires, but there isn't any business—yours included—but what can be stimulated and helped by advertising. I could no more tell you what to do in the way of advertising than a doctor could enter a hospital and prescribe for each patient without an individual diagnosis and study of each. I can, however (and hope I have), arouse a new interest on the part of every one of you in advertising as a whole and a new determination to study its application to your own business, that you, too, may enjoy the growth and prosperity that results when it is wisely and intelligently employed.

#### **Coordinating Purposes of Association and Individual**

When you went into the sheet metal business—no matter what your reason was or circumstances that brought it about—you gave notice to the world that you thought you could do better in this business than any other line.

The first is that you knew your business.

The second is that you were prepared to render the public the best available service in that field.

The third (without which the other two are useless), you assumed the obligation of letting the public know when, where, and at what price they can get the commodities and services that are regularly furnished by your industry.

As individuals you are under obligation to do good work and to give good service.

As an association you have assumed a larger obligation—that of raising the standard of your industry.

The man who doesn't do good work hurts himself. The man in this association who doesn't do good work hurts all.

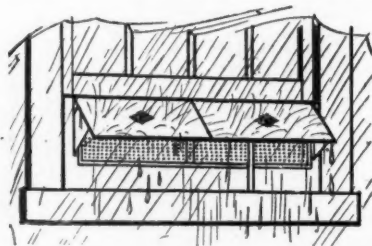
I can picture publicity, put out by members of the Sheet Metal Contractors' Association of Wisconsin, reading, "The members of this association have subscribed individually and collectively to the following creed," etc.

Then when Mr. Public goes to patronize a sheet metal company he will, of course, ask, "Are you a member of the Sheet Metal Contractors' Association?" If the reply is negative, he rightfully asks himself, "Why don't they agree with the creed about good work and good service?"

#### **Summer and Winter Window Ventilator of All Metal**

A new window ventilator made entirely of metal is being offered to the trade by Akrat Ventilators, Inc., Builders Building, Chicago, Illinois.

The manufacturer claims that several novel and practical features



**Summer View—Ventilator Reversed and Placed on Outside**

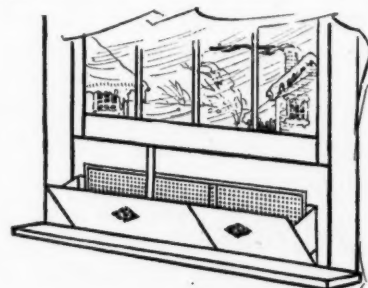
make the Protector Window Ventilator a desirable article for the sheet metal and hardware merchant to sell.

The makers state that a usual weak spot in window ventilators is eliminated in this ventilator by using long lasting copper wire cloth for the screen.

The width is adjustable, and while the ventilator is light, it is durable and rustproof, being attrac-

tively covered with heavy green paint.

The illustrations show the unusual winter and summer feature, the ventilator being placed on the inside with the shield deflecting the incoming winter air upwards.



**Winter View Showing Ventilator on Inside**

In summer the ventilator is reversed top to bottom and placed to face outwards so that the shield prevents rain from entering room.

The Protector Window Ventilator is made in several sizes and full information and prices can be obtained from Akrat Ventilators, Inc., Builders Building, Chicago, Illinois.

#### **W. E. Lamneck Company Has New Register—Floor and Waffer**

The W. E. Lamneck Company, Columbus, Ohio, have produced and are now in a position to deliver a new floor register, upon the design of which much time and thought have been expended.

One of the outstanding features of this new product is that on the register the fans close tight against the grill bars so that all dirt and dust which is bound to accumulate can be easily drawn off by passing a vacuum cleaner across the top.

When these fan blades are open they are found to be directly behind the grill bars, so that none of the capacity of the register is cut off by reason of the fact that they are there.

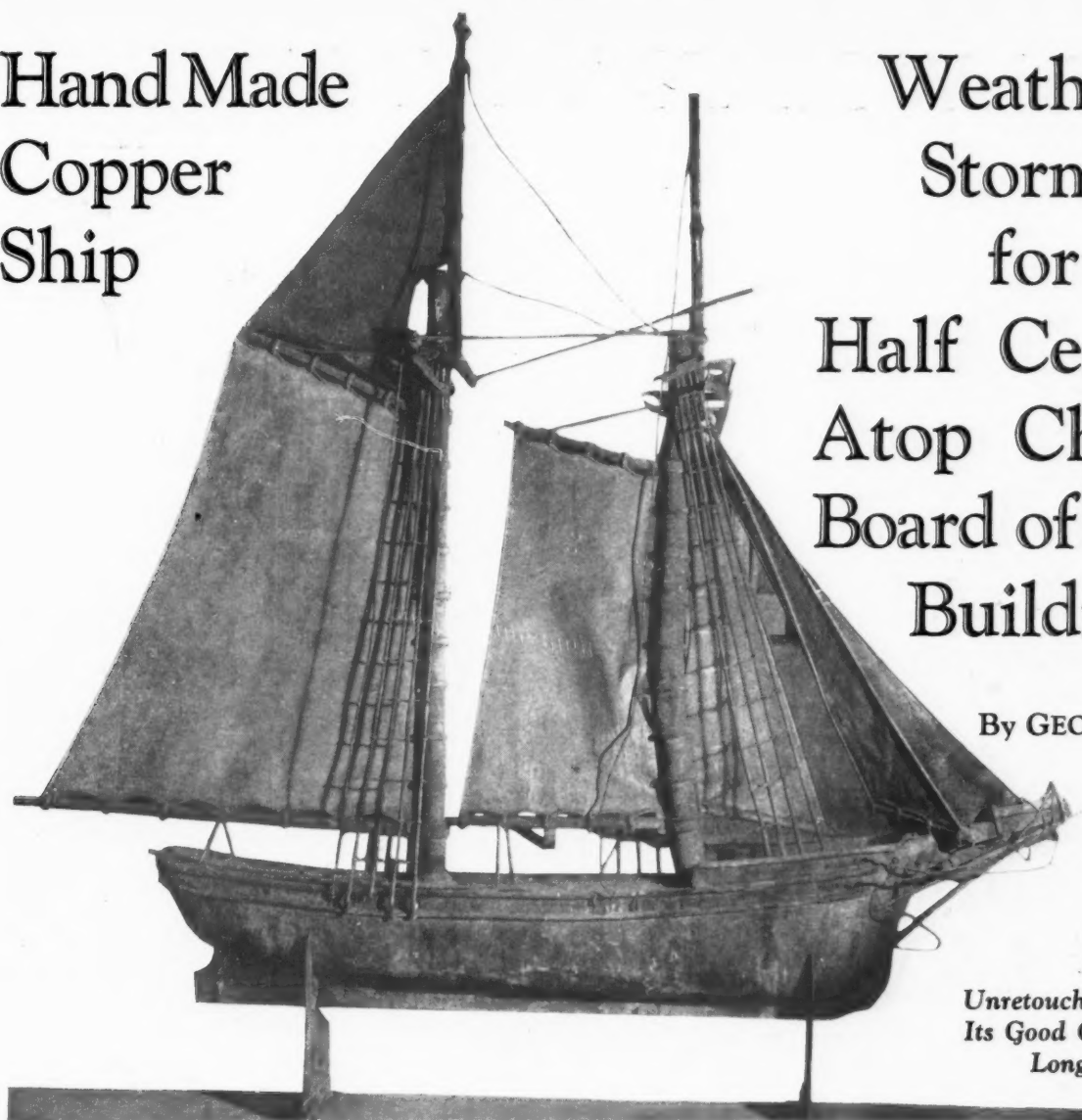
Extreme shallowness of the register is also a feature which makes possible greater ease in shipping and storing, says the manufacturer.

Complete details and prices of this new product of the W. E. Lamneck Company may be had by writing to that company direct.

# Hand Made Copper Ship

# Weathers Storms for Half Century Atop Chicago Board of Trade Building

By GEORGE DÜERR



*Unretouched Photo Shows  
Its Good Condition After  
Long Exposure*

**"A** YE, tear her tattered ensign down,

Long has it waved on high,  
And many an eye has danced to see  
That banner in the sky."

Thus did Oliver Wendell Holmes in his immortal poem, "Old Ironsides," succeed in arousing public sentiment against the proposed movement to dismantle the famous battleship Constitution. And so instead of ending her days in oblivion, the Constitution is still afloat. Holmes saved the ship by his appeal to public sentiment.

There is at the present time occasion for sentiment in the sheet metal industry also, although in this instance there was no need for poetical effusion to preserve the ship. The sentiment was there and the ship is being preserved.

Practically everyone in the United States who reads at all learned a short time ago that the Chicago Board of Trade Building was to be torn down to make room for a new structure which is to house that organization in the future. Before the wreckers began their work, however, there were certain objects having a sentimental value which were removed from the building to a temporary storage for safe keeping until the new building is erected, and among these was the ship shown in the accompanying illustration. This ship was used as a weather-vane on top of the old building for almost fifty years. It was made entirely of copper by hand by Frank Staar, president of the Frank Staar & Sons, Inc., 1473 Halsted Street, Chicago. The ship is still in an

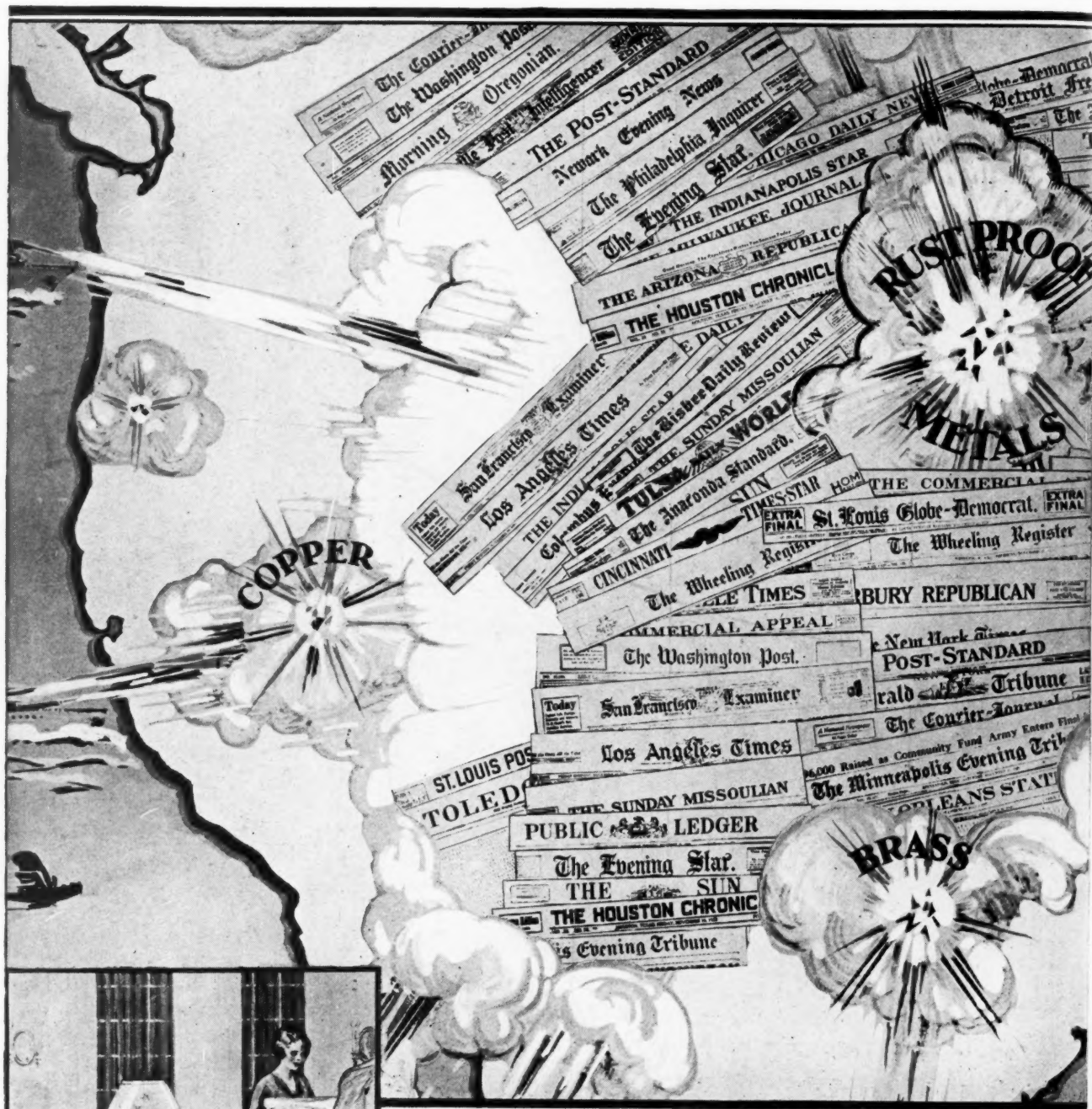
almost perfect state of preservation, in spite of its almost fifty-year sojourn on the top of the Board of Trade Building. It is now in custody of the president of the Board of Trade American Legion Post, and as soon as the new building is completed the ship will be installed in one of the Legion Post's rooms, where it will be enclosed in a glass case for permanent exhibition. A fine sentiment indeed and a fine tribute to the sheet metal working industry and a high compliment to the skill and the conscientiousness of the man who made it.

Just what sort of a man is Mr. Staar and how did it come about that he was given the commission to make this metal ship? Well, as to that, Mr. Staar has very cour-

*(Continued on Page 157)*



# BROADSIDES THAT ARE BOOM

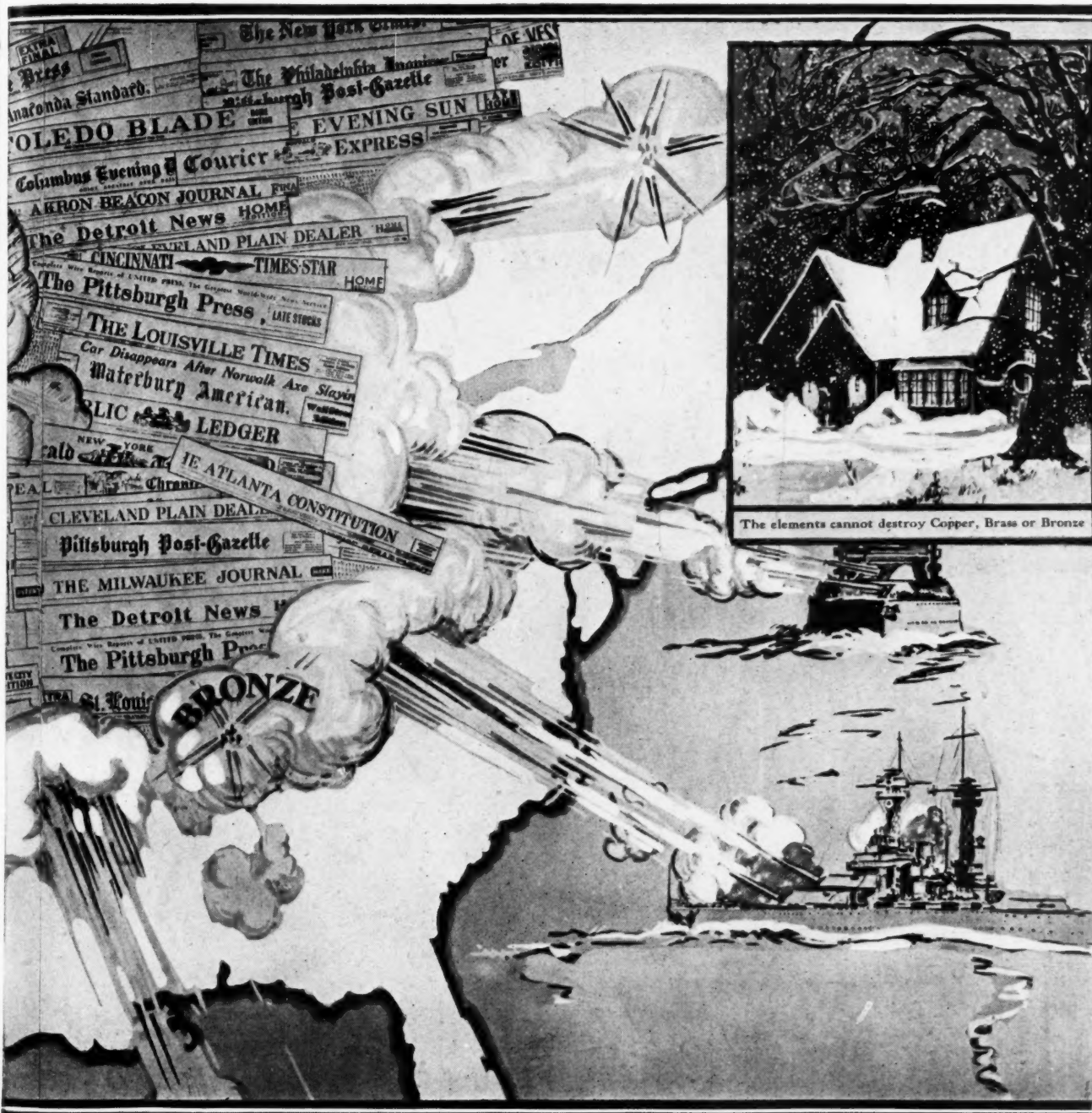


Our advertising will be read by millions of people

## A Nation Wide Campaign

THROUGH daily newspapers, building magazines and other periodicals, this Association is conducting an intensive advertising campaign. Its purpose is to better acquaint prospective builders and buyers of homes with the advantages and merits of Copper for flashings, gutters and downspouts. . . In these advertisements the leading architects of the nation are strongly recommending to builders and home owners the use of Copper, Brass and Bronze. Such endorsements are a big selling factor for you and are convincing home owners, more and more.

# ING BIG BUSINESS FOR YOU



The elements cannot destroy Copper, Brass or Bronze

## That Will Increase Your Sales

on the practical economy of using these durable materials in home construction.

This Association maintains a Building Service

Department that will be glad to advise you on any problems that you may have in connection with the use of Copper for flashings, gutters and downspouts.

### COPPER & BRASS RESEARCH ASSOCIATION

25 Broadway, New York

Midwestern Office  
Landreth Bldg., St. Louis, Mo.

Canadian Office  
67 Yonge St., Toronto, Ont.

Pacific Coast Office  
Architects Bldg., Los Angeles, Cal.

Mention AMERICAN ARTISAN in your reply—Thank you!



Forming seamless copper cauldrons from  $\frac{1}{4}$  inch Anaconda Copper sheets in the plant of the Continental Coppersmithing Company, Philadelphia. This firm standardizes on Anaconda because "we have found Anaconda Copper unusually ductile and uniform in working."



The finished kettles.

*From a flat piece of Copper to a finished cauldron*

The photographs show the initial and final stages in fabricating cauldrons from  $\frac{1}{4}$  inch thick Anaconda Copper discs. The Continental Coppersmithing Company write:

"We can frankly state that we prefer Anaconda Copper because we have not experienced any trouble or difficulties with it during the entire fabrication, and we have obtained a most uniform metal throughout the cauldron."

## ANACONDA COPPER

*—chosen for its purity, ductility and uniform quality. It is suitable for working up into any form or shape*

The remarkable ductility and uniform quality of Anaconda Copper are clearly demonstrated in the accompanying photographs showing the initial and final steps in the manufacture of copper kettles by the Continental Coppersmithing Company of Philadelphia.

This metal working firm standardizes on Anaconda Copper because of its ductility, uniform texture and purity. Read what they say:

"We have found Anaconda Copper unusually ductile and uniform in working . . . we can also state that we have used Anaconda Copper  $\frac{7}{16}$ " thick for chemical equipment of welded construction, and have found that on account of the special qualities of this copper it is most satisfactory for welding."

Anaconda Copper is the product of the world's largest and most experienced manufacturer of copper, brass and bronze. It is guaranteed 99.9% pure, and is widely preferred for its easy workability and uniform quality.

Stocks in the form of Sheets, Rolls and Economy Strips are maintained by leading distributors, assuring prompt and dependable service in all parts of the United States.

THE AMERICAN BRASS COMPANY  
GENERAL OFFICES: WATERBURY, CONNECTICUT

ANACONDA COPPER  
BRASS  BRONZE



# How Much Sheet Metal Experience Does Deepsea Fishing Require?

*Albert J. Wagner, Louis Rysdon,  
and John Maier Are Good Authorities*

**A** TOTAL of 265 years of sheet metal experience went deep-sea fishing off Miami, Florida, the other day, proving that President-elect Hoover is not the only lover of fishing as sport.

Some time ago I met Albert J. Wagner of Chicago on the street and he informed me that he had just purchased tickets to the sunny southland for himself, his wife, and daughter, Alice. The Wagners are stopping at Henrietta Towers, Miami, Florida, and from thence came

"Louis S. Rysdon of the Louis S. Rysdon & Son, Chicago.

"Albert J. Wagner, Chicago.

"It is interesting to note that a total of 265 years of sheet metal experience were represented in these six men.

"Leaving from the pier of Mr. Bohnert's pretentious estate, situated as it is so close in at 1419-N. W., S. River Drive, and yet far enough out to be in the country, "A Tinner's Dream." The buildings set away back on a hill, making a beau-

green parrot, snapper, sand eel, grunts, toadfish and sea urchin.

"Mr. Kuck and Mr. Rysdon were excused from the deck, but not until they had caught their share of fish and only after continuous rolling of our good boat did they give up. (Mr. Wagner didn't say what they gave up.)

"After we returned to calmer seas our good host, Mr. Bohnert, prepared what we all called the best ever—a plentiful supply of fish, potatoes in the jackets, sliced tomatoes, celery, northern coffee with cream, bread and butter. Orange cocktails and smokes were served until we reached the harbor again and during the trip up the river."

Fishing surely must be good down Florida way if it takes 265 years of sheet metal experience to land a few.

The Albert J. Wagners are planning to return to Chicago via Washington so as to be present in Washington during the inauguration exercises of President-elect Hoover on March 4th.

There certainly must be money to be made in the sheet metal contracting business judging from the way these birds enjoy life traveling hither and yon.

## **Adherence to Department of Commerce Simplification Program Now Equals 82.64%**

Bank checks now conform 82.64 per cent with the simplification program developed by industry in cooperation with the Department of Commerce, it has been reported by the Division of Simplified Practice of the Bureau of Standards, United States Department of Commerce, following a review or audit of the simplified program to ascertain the support that it is receiving. This program is known as Simplified Practice Recommendation No. 50, Bank Checks, Drafts, Notes, etc.



**M. J. Bohnert's Residence, 1419-N. W. So. River Drive, Miami, Fla.,  
and "Teb I Bee"**

the following letter from Mr. Wagner, which proves beyond a shadow of a doubt that Mr. Wagner has not lost the spirit of play:

"The following sheet metal contractors were the lucky guests of M. J. Bohnert on his 40-foot fishing cruiser, the 'Teb I Bee,' on a deep sea fishing party:

"M. J. Bohnert of the Bohnert Sheet Metal and Roofing Company, Miami. You will remember that Mr. Bohnert is the gentleman who organized the Florida Sheet Metal Contractors' Association years ago and was its first president.

"H. J. Kuck of the Standard Sheet Metal Works, Miami.

"Fred Buckley of the American Cornice Works Company, Wichita, Kansas.

"John Maier of the John Maier Company, Chicago Heights, Illinois.

tiful setting of Spanish architecture, with its red Spanish tile roof and white walls, its banana and other tropical trees, shrubbery, flowers and spacious lawns, a picture I will never forget. Such was the picture we left to cruise off down the Miami river, passing under the many bridges, some of the lower ones opening at our signal, passing many fishing wharves, fishing boats of all manner of description, and gliding around the river bends and out into the Bay of Biscayne, passing the Miami Boat Club harbor, the haven of hundreds of the finest of boats, then turning south to the old "Spanish Light House" and Cape Florida, and thence to the Gulf stream.

"Some of the following kinds of fish were caught: Nassau and spotted groupers, mackerel, blue and

## WHO'S WHO, WHERE!

ST. LOUIS, MO.—Hemp & Company, manufacturers of sheet metal products, has acquired the business of the A. Geisel Manufacturing Company of that city, this being the second sheet metal manufacturing plant the company has acquired in the past two years, having acquired the Niles Iron & Steel Roofing Company, of Niles, Ohio, and Hemp & Company will build an addition to its plant to take care of this additional business.

SEATTLE, WASH.—A. J. Haye is reported to have sold the Eastlake Sheet Metal Works, 107 Eastlake Avenue, to Kred Kroner.

CHEHALIS, WASH.—The Modern Utilities Company of Lewis County has been incorporated to do a wholesale and retail furnace business by Virgil Baker, H. M. Baker, and others.

KELSO, WASH.—W. H. Holloway has purchased a half interest in the Coast Sheet Metal Works, 601 Main Street, from B. G. Scott.

PORTLAND, ORE.—J. W. Deffler has engaged in business at 873 Sandy Boulevard, under the name of Duffler Rudy Furnace Sales Company.

MADISON, WIS.—The Madison Paul F. Mueller Company has been incorporated to conduct a contracting ventilating engineering business, by H. F. Meier, G. Sandberg and B. Mjelde.

CEDAR RAPIDS, IA.—Ilten & Taege, 325 Fourth Avenue West, have the warm air heating contract for residence of Bruce A. West.

WATERLOO, IA.—The Fred J. Hacker Sheet Metal & Furnace Works, 809 East Fourth Street, has the heating contract for residence of Sidney Y. Letsch.

PORTLAND, ORE.—J. C. Bayer, 204 Market Street, has the sheet metal and ventilating contract for the J. J. Newberry Company store.

Fields & Usher, 967 East 30th, North, has the sheet metal contract for residence of O. L. Price.

OAKLAND, CAL.—The Golden Gate Sheet Metal Works has engaged in business at 1515 14th Avenue, under the management of Matthew McGee.

Clarence M. Vance will operate from 354 Hobart Street under the trade name of Standard Metal Weather Strip Company.

SAN FRANCISCO, CAL.—The Fordeir Cornice Works, 269 Potrero Avenue, has the hollow metal door and sheet metal work contract, and the U. S. Metal Products Company, 330 10th Street, the double hung metal window contract for the Life Science Building of University of California, Berkeley, Cal.

OAKLAND, CAL.—E. W. Anderson, 3103 San Pablo Avenue, has the sheet metal work and heating contract for the Grammar School at San Lorenzo, Cal.

LOS ANGELES, CAL.—Bleeker Brothers, 1141 East 63rd Street, has the sheet metal contract for the recitation building and the dormitory building for Scripps College, Claremont, Cal.

The L. S. Wilson Company, 823 East 15th Street, has the sheet metal contract for the addition to the Van Nuys Building.

David Reznick has engaged in business at 1951 Brooklyn Avenue under name of General Sheet Metal Works.

KANSAS CITY, MO.—The Detroit Steel Products Company, makers of the Fenestra steel windows, has opened a branch office at 609 Interstate Building, under the management of Leo Leeds, who has been in the Kansas City territory for some time.

WICHITA, KAN.—The American Cornice Works Company, 237 North Water Street, has the sheet metal contract for court house at Jetmore, Kan.

RICHMOND, VA.—The Burton Metalcraft Company, 2415 West Main Street, has the roofing contract for Richmond Public Library.

HOUSTON, TEX.—The Rogers Asbestos Company, Buffalo and Commerce Streets, has the ventilating and sheet metal contract for the Jefferson Davis High School addition.

OKLAHOMA CITY, OKLA.—The Standard Roofing Company, Broadway and 24th Street, has the sheet metal and roofing contract, and the Larrance Tank Company, Lawton, Okla., has the steel sash and metal door contract for theater of Lawton Amusement Company at Lawton.

SAGINAW, MICH.—The Means Stamping Company, turning out metal stampings for automobile manufacturers, has purchased the plant of the Carde Stamping & Tool Company at that point.

MINNEAPOLIS, MINN.—The Reese Metal Weatherstrip Company has moved its office and plant from 210 South 10th Street to 111 South 10th.

The Consolidated Sheet Metal Works, 661 Hubbard Street, has been awarded the roofing and sheet metal contract for police and fire station at Shorewood, Wis.

DULUTH, MINN.—A. W. Kuettel Company, 308 Lake Street Avenue South, has been awarded roofing and sheet metal contract for high school building at Virginia, Minn.

PORTLAND, ORE.—The Grand Sheet Metal Works, 62 East Third Street, North, has the roofing contract for reconstruction of recently burned Sichel & Lang Building.

Betts & Wambold Sheet Metal Works, 1322 East Glisan, has the sheet metal contract for D. R. Blackman residence.

SEATTLE, WASH.—D. E. Fryer & Company, 1220 Utah Street, has the contract for steel rolling doors for the Fashion Craft Building.

PALO ALTO, CAL.—The Palo Alto Sheet Metal Works has moved into its new shop and office quarters at 521 Ramona Street, and this company has just received the sheet metal contract for \$12,000 residence of Paul Clagstone.

SAN FRANCISCO, CAL.—The Berger Manufacturing Company, 1120 Mission Street, has been awarded the metal ceiling contract for the C. Adolph May store building.

COLUMBUS, O.—The Columbus Heating & Ventilating Company, 425 West Tower Street, has let the contract for construction of three-story 80x90 foot factory building to cost \$73,000.

LOS ANGELES, CAL.—The Service Restaurant Equipment & Sheet Metal Works has engaged in business at 421 North Evergreen Avenue, under the management of Samuel Soltes.

DUBUQUE, IA.—Geisler Brothers have been awarded the roofing and sheet metal contract for recreational building for the Sisters of Charity at Clarke College.

KNOXVILLE, TENN.—The Haynes Brothers Furnace & Tin Work Company, 324 East Magnolia Avenue, has been incorporated with a capital stock of \$25,000 by Fred N. Trunnell and L. E. Haynes.

DETROIT, MICH.—The National Stamping Company, 617 Clover Avenue, has increased its capital stock from \$50,000 to \$200,000.

EAST CEDAR RAPIDS, IA.—The Cedar Rapids Sheet Metal Works, 710 South Third Street, has the sheet metal contract for Kresge store building in Marshalltown, Ia.

NORTH PORTLAND, ORE.—The Isler Metal Works, 100 East 12th Street, has been awarded the sheet metal and roofing contract for the L. R. Tepla factory building.

PORTLAND, ORE.—The Abbott Tinning & Roofing Company, 449 Union Avenue North, has been awarded the sheet metal contract for apartment building of S. E. Henderson, Inc.

The Acme Metal Works, Inc., 452 Williams Avenue, has the sheet metal contract for the Artisans Building.

The Grand Sheet Metal Works, 62 East 3rd North, has been awarded roofing and sheet metal contract for parish house for St. Mark's Episcopal Church.

P. Enns, 1005 East 36th North, has the sheet metal contract for Robert B. Beat store building.

SEATTLE, WASH.—The Continental Sheet Metal Works, 2310 Rainier, has the sheet metal contract for the Kress store building.

Orget Sound Sheet Metal Works, 3631 East Marginal Way, has been awarded the roofing contract for hospital building of Dr. C. F. Eikenbary.

The Continental Sheet Metal Works, 2310 Rainier, has been awarded the roofing contract for the Columbia Motor Company business building.

SAN FRANCISCO, CAL.—The Guilfooy Cornice Works, 1234 Howard Street, has been awarded the sheet metal contract for Wesix, Inc., factory building.

R. J. Neilan, 17 Allston Way, has been awarded the sheet metal contract for Chas. Crocker residence at Pebble Beach, Cal.

OAKLAND, CAL.—The East Bay Sheet Metal Works, 1101 Market Street, has the sheet metal contract for Pacific Nash Motor Company building.

LOS ANGELES, CAL.—The L. S. Wilson Company has the sheet metal contract for mercantile building of Fox-Gaynes Realty Company, in San Diego, Cal.

Emil Brown & Company has been awarded sheet metal contract for Junior High School in Pomona, Cal.

The Ed Darling Sheet Metal Works, 8440 Melrose Avenue, has sheet metal contract for residence of Walter Cline.

The Peerless Sheet Metal Works has been awarded sheet metal contract for apartment building of P. F. Ortman.

The Hodge Sheet Metal Works, 5851 South Broadway, has been awarded sheet metal contract for the Sun Realty Company office building.



**HAND MADE COPPER***(Continued from Page 151)*

teously given us an opportunity to look in upon the sheet metal industry as he saw it in his early experience, not only in the fatherland, but in this country as well. What Mr. Staar has to say as a man who has spent his entire life in the sheet metal working industry both as a worker and an employer will be very interesting to all. The man who built the ship of copper shown in the accompanying illustration, which withstood the batterings of all kinds of weather on the top of the Board of Trade Building in Chicago, and is still in a good state of preservation, will now speak:

**Some Very Interesting Experiences**

"My father, Franz Staar, was a veterinary in the employ of Count Bathany in Hungary, and I was born in March, 1858, in Stadt Schlaining, now belonging to Burgenland Austria. My father died when I was 8 years old. Before I was 12 I became an apprentice in the sheet metal trade for four years in Oedenburg, Hungary. The working hours were 12 and often 14 per day. I did not receive any pay in those four years, just my board, and many apprentices had to pay to the boss quite a sum to learn the trade.

"At that time there were very few machines in the sheet metal line and in our shop we had none. Every piece of work had to be made by hand, and what I had learned there became very handy to me in later years.

"Before I became a journeyman, after the expiration of my four years' apprenticeship, I had to make a piece of work which was very closely examined by the trade's masters. On their recommendation I became a journeyman and had to join the trades union (not to be compared with unions of the present time). We had a drawing school where cutting was also taught, and the older members instructed the younger. Many good ideas were learned in these trades unions. Every member was obliged

to hold the trade in high honor, and he did.

"It was also the custom in those days that a journeyman had to join the 'Wanderyahre als Handwerksbursche' if he wanted to amount to something, and this was really the best school. He had to travel from city to city and from land to land, calling at the trade shops and asking for work. After he showed his credentials to the master he was welcomed by him and all the journeymen. The apprentice brought a chair and he was invited to be seat-

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*Mr. Staar, although he is the President of Frank Staar & Sons, Inc., is no longer very active in the business. He is at the present time spending the winter in Los Angeles, California.*

*In this article he has shown many experiences which are typical of those of sheet metal men who came over to this country to make their way back in the 80's. That these men had to be first of all first class mechanics and artisans in their line is very much in evidence in what Mr. Staar has to say.*

*It is with a great deal of pleasure and satisfaction that we view the efforts of the powers that be in the sheet metal industry of today to bring the industry back to a state of efficiency in workmanship that obtained in the days of which Mr. Staar writes.*

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ed. The newcomer brought greetings from the masters and journeymen, and there was a nice 'shot.' If the master had no work for him he gave a piece of money, with his regrets, for not being able to give him work, and if he wanted to stay overnight in the city he was invited to stop at the 'Herberge,' the club rooms of the trades union, where bed and board was free to him. This was not begging; it was simply the custom. As money was not plentiful and railroads, if any, very expensive, the Handwerksbursche

traveled by foot, and those days were the happiest ones in my life when I traveled from country to country on foot. Working in many cities and shops, I obtained knowledge of the different employers and their methods, which when you served four years' apprenticeship made you thoroughly familiar with the trade. In other words, a mechanic in those days knew his business.

"I came to Vienna, Austria, where I was employed in one of the largest shops and where I had a wonderful chance to enrich my knowledge on ornamental work in zinc, copper and brass.

"I married in Vienna in the year of 1879 at the age of 21, and in 1884, June 12th, I arrived with my wife and two children in Chicago.

"It was hard, very hard, for me to obtain a job, as I could not speak English. I was forced to ask for work only in German shops. I was asked whether I had worked here before, and I told them no. Then I was told that they could not use me as I surely could not do the work required in Chicago. After three weeks of hunting for work I was told by someone to try Knisely and Miller, and to tell them, if asked, that I had worked here before. This firm at the time was the largest one in Chicago. In the meantime I learned a little English, so I asked them for a job.

"Mr. Cooper was superintendent of the firm and he told me to go upstairs to see Mr. Schulz, the foreman. I was asked by him whether I had worked here before, and I told him yes, in New York. Where? For Meier on Broadway. Evidently he saw in my eyes that I had not told the truth. He smiled and gave me work, which made me very happy. After three weeks in the shop working on smaller articles, I asked Mr. Schulz to give me a nice piece of work to do so that I could show him what I could do.

"In those days most of the sheet metal work of the growing cities of the western states was made and erected by Chicago firms, so Mr. Schulz gave me the details for a big



copper finial for some courthouse out west, and after I finished the same I got the order to help a Mr. Edler, who was doing the raising work (hammered work) in the shop.

#### **Good Workmanship Leads to Better Job**

"The Board of Trade building was being erected at that time (1884) and the firm got the contract for the sheet metal work and slate roofing, so we had to make the boat for the tower. Mr. Edler, the raiser, started to hammer the hull of the boat and I was told to put it together, and as the two sides did not fit, I hammered them over so I could make a good job of it. Mr. Edler did not like the idea of a greenhorn correcting his work. We had some words and he quit. Mr. Schulz, the foreman, came and scolded me, saying that I put him in a nice fix—he had nobody now to make that boat. I told him I could make it, and was told to go ahead with it.

"All the grain raising western states naturally were interested in the Chicago Board of Trade building, which was about the largest building at that time in Chicago, and the newspapers from out west sent their reporters to Chicago. These men wanted to see the boat that was to go on the tower as a weathervane. Mr. Cooper brought them up into the shop and they watched me working on the boat and wanted to know from what country I came and what pay I was getting, so Schulz was called and asked by Cooper, what does this Dutchman get a day? Schulz said, two dollars and twenty-five cents. The reporters were very much surprised, and I think they said it was a shame not to pay a man more for such work, and Schulz was ordered to raise my wages for next week 25 cents per day, and so I got \$15 per week for 60 hours of labor.

#### **Erection Made in Bitter Cold Weather**

"About the first part of December, 1884, the boat was to be erected, and it was quite a job to make all preparations to hoist the boat to the tower, which was over 300 feet

in height, but it was done without accident.

"The winter of 1884-1885 was very severe but we had to finish the job, and we had to connect the boat with a dial on the ceiling of the trading hall which showed the direction of the wind when the boat turned. This connection between boat and dial was made by wrought iron pipe through the wall of cast iron spiral stairs leading up to the tower. A few days before the job was completed I walked up to the tower in the morning and missed my gloves. Not wanting to go all the way down to buy a pair, I thought I could stand it without them, so I flapped my arms across the body and kept on working. But the next morning I could not touch anything—my fingers were frozen. The next six weeks I could not work and when I reported for work I was told there was none. So I had to look for another job and found it on Desplaines Street. Thomas Shean, of Thomas Shean Company, metal window manufacturers, was foreman there, and he surely treated me fair and square.

"My next job was with Thomas Allen on Randolph and Elizabeth. There I got the highest pay that ever had been paid to any sheet metal worker up to that time—\$4.50 per day of 10 hours. I worked for Mr. Allen for over two years and was well treated.

#### **Enters Business for Himself in 1888**

"In August, 1888, I entered business for myself. I have always done my best to uphold our trade by turning out the best of workmanship and giving everybody with whom I have done business dollar for dollar, and this principle is followed up by my sons. (This is borne out by reference to the Paradise Theater job where some fine zinc work was erected.)

"There are many practical ideas and methods which save time and labor that have been used in Chicago and other parts of the country for years which I originated, and a number of sheet metal contractors

now in business for themselves who learned the trade working for me.

"In the '80's there was little transportation in the city of Chicago, and to reach the shop and to save car fare, I had to leave home at 5:30 a. m. and walk to work, arriving there at 6:45 and ready for work at 7 o'clock. We also had to carry tools and firepot and often material to the job, unlike conditions of today. If a man did not finish the piece of work he was on at quitting time he usually finished the same even if it took 15 or 20 minutes longer, to save going there in the morning and spend a half day."

#### **C. Emrich Company, Columbus, Ohio, Has Developed New Sales Literature**

The C. Emrich Company, Columbus, Ohio, makers of Supreme Florence hot blast heaters, stoves and ranges, have recently released a new catalog and other sales literature containing descriptions of the new developments on their Florence hot blast furnaces.

This new literature is not only of value in keeping the furnace installer informed on the latest developments in furnace construction, but there is a veritable well of information on warm air heating, firing a furnace, and other information which a furnace installer and home owner can use to good advantage in getting the highest efficiency out of their heating plants.

In addition to showing illustrations of the complete line of furnaces which this company makes, the catalog also contains illustrations of the several parts of the furnace disassembled. These illustrations are so arranged that the reader can see exactly how each part is constructed and how it fits together with the other parts.

Full details of the products of this progressive company can be had by writing to them, corner Fulton and Second Streets, Columbus, Ohio, and every warm air furnace installer who desires to keep posted on the latest developments in furnace construction should write for this sales literature.



Display of L. J. Mueller Furnace Company at Milwaukee Hardware Show

## *Warm Air Furnaces Attract Attention at Milwaukee Hardware Exhibit*

*L. J. Mueller Furnace Company  
Has Unusually Attractive Space*

ONE of the larger exhibits at the 1929 Wisconsin Retail Hardware Dealers' Convention, held at the Milwaukee Auditorium, February 5th to 8th, was the display of the L. J. Mueller Furnace Company, of Milwaukee, which is illustrated herein.

Three full display spaces, measuring 42 feet in length, were used and the following units were shown: Full front furnace, in single and double door types, furnacette in both coal and gas-fired types, combination wood and coal furnace, Hi-Power steel furnace, Gas Era gas-fired furnace, double radiator furnace, Gas Era gas-fired boiler, new jacketed coal boiler, Perfection automatic air moistener and Mueller fittings, registers and grilles.

Most of the dealers attending the convention inspected the display during the course of the week, and

much interest was shown in the various units, particularly the Gas Era furnace. "Most of the dealers who sell furnaces have noted the decided trend toward gas heating and are anxious to find out all there is to know about the product and the market," said V. P. Brehm, assistant sales promotion manager.

### **A. L. Mayers Clears Mystery for Wesley Johnson, Wilkinsburg, Pa.**

In the February 9th issue of *AMERICAN ARTISAN* Wesley J. Johnson, Wilkinsburg, Pennsylvania, had something to say about a shortage in the warm air furnace installation of A. L. Mayers. In order to set Mr. Johnson right on the matter, Mr. Mayers has made a further explanation as follows:

"I have your February 9th, 1929, issue and note therein that Wesley

Johnson states that he finds a discrepancy in my warm air installation figures appearing in the December 22nd issue. I have checked these over and I have discovered where he arrived at his conclusion, although if he had checked up the September 29th issue, he would have found it differently.

"In mailing you my cost sheet I had five 10-inch collars, instead of four, which added 78 inches more to the pipe area and I also used 9-inch runs to the stacks that only required 8-inch runs. So I think this will clear the matter up for Mr. Johnson."

Other warm air furnace installers are urged to send their problems in to *AMERICAN ARTISAN* for solution. They will find this a quick means to learn what failings their jobs have. Do not hesitate. Let us help you.

## Many Warm Air Furnace and Sheet Metal Mfgs. Exhibit at New England

*Exposition Gives Dealers Opportunity to View Latest Developments in All Lines*

**T**HE following is a list of warm air heating and sheet metal manufacturing exhibitors at the Pennsylvania and Atlantic Seaboard Hardware Exposition:

Andes Range and Furnace Corporation, Geneva, New York. Andes reconditioned air heating system.—Don Pershing.

Berger Brothers Company, Philadelphia, Pennsylvania. Roofing accessories for sheet metal workers.—J. R. Salinger, E. A. Tustin, and A. H. Kirby.

Brillion Furnace Company, Brillion, Wisconsin. Furnace and furnace vacuum cleaner. (Stocked in Reading for the eastern trade.)—D. I. Heaps of Harrisburgh.

Clayton and Lambert Manufacturing Company, Detroit, Michigan. Firepots and blowtorches.—S. J. Cloughly and Fred Jacob.

Crall-Chase and Company, Camden, New Jersey. Hart and Cooley registers, grilles and enclosures.—Roy M. Snyder, George L. Kost, R. N. Daggan, and John B. Jones of Hart and Cooley Company.

Co-Operative Foundry Company, Rochester, New York. Stoves, ranges, gas, coal, combination electric, warm air furnaces.—H. V. Jennings.

Follansbee Brothers Company, Pittsburgh, Pennsylvania. Security products, Follansbee forge sheets, Sheer furnace control.—D. G. Gaston, George H. Hartman, and J. N. Crago.

Fox Furnace Company, Elyria, Ohio. Sunbeam cabinet heaters.—T. B. Valiant.

Hall and Carpenter, Philadelphia, Pennsylvania. Furnaces, fittings and supplies, and sheet metal products and volume blowers.—Z. T. Hall, H. D. Hall, Howard Rice, N. A. Patterson, William White, C. W. Smith, E. Russell Meyers.

Lennox Furnace Company, Syracuse, New York, and Marshalltown, Iowa. Torrid Zone all steel furnace.—C. H. Schechter, Sales Manager, John W. Norris, Frank F. Harmon and O. Gedeist.

David Lupton's Sons Company, Philadelphia, Pennsylvania. Sheet metal products, conductor pipe and gutter products and fittings.—J. McGeady.

Marshall Furnace Company, Marshall, Michigan. Caloric pipe and pipeless furnaces.—I. C. Livingston, Marshall, Michigan; George L. Kost, Carlisle, Pennsylvania, and Mahlon Rickerts and Sons, Caloric Distributor for Philadelphia and vicinity.

National Lead Company, Chicago. Sheet lead, solder, lead washers, lead headed nails, etc.—F. C. Jussen, Manager of the metal products division in Philadelphia.

The Peck, Stow and Wilcox Company, Southington, Connecticut. Builders hardware and mechanics' hand tools.—Wm. K. Hughes, John Dolan and George D. Arnold.

Richardson and Boynton Company, New York City. Warm air furnaces, ranges.—Clyde T. Moyes, Mont. H. Smith, Jr., and Frank M. Robinson.

Frederick Sabin & Co., Inc., Philadel-

phia. "Sunbeam" warm air furnaces.—Howard Miller.

Star Expansion Bolt Company, New York City. Expansion bolts and new spring toggle bolts for sheet metal workers.—M. G. Hayden and G. A. King.

Tuttle and Bailey Mfg. Company. Warm air registers, grilles and radiator cabinets.—T. A. Warner and E. Molander.

United States Register Company, Battle Creek, Michigan. Warm air registers and grilles.—B. J. White and A. A. Stagg, representing the Albany, New York, branch of the United States Register Company.

J. Wiss and Sons Company, and Krauter and Company, Inc., both of Newark, New Jersey. Shears, scissors and snips. Pliers, chisels and wrenches.—H. C. O'Hare, W. F. Zimmer, H. T. O'Grady, and C. L. Gairoard.

### F. G. Deets, Aurora, Illinois, Has Suggestion for W. G. Jenkins

In answer to your request of January 12th in *AMERICAN ARTISAN* for a solution of your furnace troubles, I will say that this problem interests me greatly, as do Mr. Sorensen's articles.

Will endeavor to give my ideas of the job, as Mr. Sorensen has, without seeing the exact conditions. I happened to be called to one of our nearby cities a short time ago to see a job where the owner was having very much the same trouble you are experiencing. He had everything changed except the cold air returns and found his trouble in the cold airs.

I notice by your sketch that the cold air in the living room is in the piano space. If the piano is setting over this register, the circulation is greatly diminished. I would suggest that you place this cold air register between the vestibule door and stairway and make it 14" x 48", taking in three joist spaces with pan underneath joist 2" deep under the register, with a slant to 6" deep at the timber or wall. Then have a transit connection tapering to a 24" pipe put on this end.

From the dining room move the cold air box underneath the joist

diagonally to get as direct a connection to the furnace as you possibly can. Drop with a 16 inch diameter pipe to boot. The cold air from the bedroom above can be carried between the joist in the basement and dropped into the box from the dining room. If this cannot be done place a register in the baseboard in the dining room and let the air circulate to the register in the floor.

Place a baffle plate between the cold air boots extending to furnace and up as high as the opening cut in the casing. Fill the old underground duct, especially that portion under the furnace.

Change the bonnets so that all pipes come out of the top and be sure they are all the same height to the top of the elbows over the furnace, using the 14 inch elbow as a guide.

I hope what has been suggested in this item will be of some benefit to you and whatever you decide to do in making the change, *ARTISAN* readers will appreciate knowing just what changes were made.

F. G. Deets  
217 W. Park Ave.  
Aurora, Ill.



Michigan Sheet Metal & Roofing Contractors' Association, Flint, Michigan, March 5, 6, 7, 1929. Frank Ederle, 1121 Franklin Street, S. E., Grand Rapids, Michigan, Secretary.

Pennsylvania Sheet Metal Contractors' Association, Hotel Brunswick, Lancaster, Pennsylvania, April 2, 3 and 4, 1929. Secretary, W. F. Angermyer, 7253 Frankstown Avenue, Pittsburgh, Pa.

Sheet Metal and Roofing Contractors' Association of Kentucky, Tyler Hotel, Louisville, Kentucky, April 8, 1929. Secretary, L. D. Stiglitz, 123 West Main Street, Louisville, Kentucky.

National Warm Air Heating Association annual meeting, Claypool Hotel, Indianapolis, April 9, 10, 11, 1929. Secretary Allen W. Williams, 174 East Long Avenue, Columbus, Ohio.

Illinois Sheet Metal Contractors' Association, April 16, 17, 18, 1929, Peoria, Illinois. Secretary, Ralph W. Poe, 44 White Court, Canton, Illinois.

National Association of Sheet Metal Contractors of the United States, Lord Baltimore Hotel, Baltimore, Maryland, June 3 to 7, 1929. Secretary, W. C. Markle, 336 Fourth Avenue, Pittsburgh, Pennsylvania.

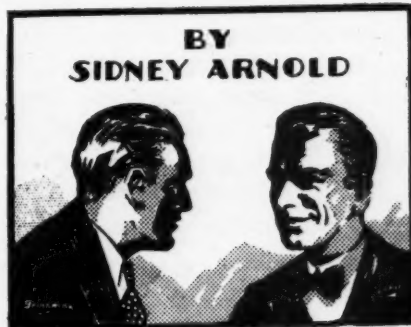


# RANDOM NOTES AND SKETCHES

My friend Joseph Dersher, Toledo, Ohio, and Vice President of the Ohio Sheet Metal Contractors' Association, received a pleasant surprise when he arrived at the Deshler Hotel, Columbus, last week for the convention. He had been advised that a reservation had been made for him by the local committee, but he hardly expected to be received the way he was. The first surprise Joe got was when he signed the hotel register. No sooner had the hotel clerk read the name than he was galvanized into action. He called for the bell-hop on the double quick and before Joe knew what was happening, he was being ushered into the elevator. Arriving at his "room" Joe found a second bell-hop smilingly holding the door open, but upon entering, instead of a room, Joe found that an entire suite, one of the best in the hotel, had been reserved for him. Joe surely lived in style during that convention, and it was altogether fitting and proper that he do this, for was he not the Vice President of the Ohio Sheet Metal Contractors' Association, and as such was he not called upon to entertain certain dignitaries who must be impressed? Certainly. Well, anyway, Joe knows how to entertain, and next year when the association goes to Toledo for their annual convention, he will give plenty of evidence of that fact. I was certainly glad to see that Joe was so well taken care of in Columbus at any rate, and I am sure that the dignity of the organization was held up to the proper level.

\* \* \*

Every nerve of Charles Grote, member of the Board of Directors of the Ohio Sheet Metal Contractors' Association, was taut. His every sense was strained to the



highest pitch. Slowly, very slowly, he turned the knobs, anxiously noting the effect of every deviation. He mustn't turn it too fast, or surely he would lose it. A fine adjustment now would just get it and then—success!

He twisted the knob to the right very slowly. Eureka . . . he had it! The hot and cold water for his bath was adjusted just exactly right.

\* \* \*

A. E. Bogen, Home Furnace Company, Columbus, Ohio, asked a Pullman porter the amount of his average tip. The Negro replied that the average amount was one dollar. Mr. Bogen handed him a one-dollar bill.

The porter creased the bill affectionately and said: "Yassah, boss, but you is de fust puhson what has come up to de average."

\* \* \*

## Watchful Waiting

The lecturer warmed to his task. "The consequences of drunkenness are terrible. If I had my way I would throw every cask of beer, every bottle of wine, every keg of brandy into the middle of the ocean."

Voice from the Audience: "Bravo, Bravo!"

Lecturer (very pleased): "You



are also a confirmed teetotaler, my friend?"

Voice: "No, I'm a deep-sea diver."

\* \* \*

Les Taylor, vice-president of the International Heater Company, is rather hot under the collar about the letter which Tommy Richardson sent to me last week. Here's what he says:

"Tommy Richardson dished up a lot of 'baloney' on this golfing proposition when he stated that he and Art Lamneck were without doubt the two best golf players in this industry of ours.

"On behalf of my partner, Jack Stowell, and myself, let me say that we are open to challenge from anybody, and, like the prize fighter, are particularly anxious to take on those we know we can lick. So if Tommy and Art want to make a date we not only will permit them to name the time but also the place, as long as they keep it reasonably close to your part of the country.

"The Sidney Arnold loving cup is reposing on my desk now, as Jack Stowell kept it the first six months and then sent it to me, and every time I look at it, after having read Tommy's remark about Art Lamneck breaking his clubs cutting his hands and the insufficiency of his flask, I am reminded of the poem that starts out—

'I beat them when they had lum-bago—'

and goes on until the ending—

'But I never beat a well man in my life.'"

\* \* \*

## Wanted to See It

Father: The man who marries my daughter will get a prize.

Ardent Suitor: May I see it, please?

## Steel Prices Rise With Production

*Bars, Plates and Shapes Follow Sheets and Strip Up—Pig Iron Buying Movement Nears—Short of Semifinished—Deliveries Recede*

**R**ISING steel prices are the sequel to record-breaking steel production. Bars, plates and shapes this week have been advanced \$1 per ton and cold finished bars \$2, following the recent increase of \$2 in strip and sheets by some producers. Higher prices for semi-finished steel continue under consideration.

### Lacking Sheets, Some Users Turn to Strip

With most important consumers protected for the first quarter and some deliveries against contracts inevitably falling into the second quarter, the new levels for the present will apply chiefly against small, pickup business. Producers, however, expect the general price structure to harden and specifications to be further stimulated.

Major interest of consumers continues in specifications against current contracts and in numerous instances expansion of these commitments, rather than in fresh buying. The resulting eclipse of bookings by specifications is regarded within the industry as a seasonal condition and not an indication of lack of confidence by buyers.

The specifications have broadened in the past week and give further backing to the expectation for a record steel output this month. The shortage of semi-finished steel continues acute in the Mahoning valley, and to a lesser degree at Chicago. One Mahoning valley maker has passed by 5,000 tons of sheets, need for which developed in the past fortnight. Some automotive parts interests, unable to obtain full finished sheets, are turning to wide strip.

### PIG IRON

Pig iron at Pittsburgh is showing more signs of life. The National Radiator Corp. has closed with several producers for a total of 7,000 to 8,000 tons of No. 2 foundry iron for plants at New Castle and James-

town, Pa., and Trenton, N. J., for second quarter.

No divergence from the current price of \$17.50, base, valley, or its equivalent, was noted in these orders. More consumers are seeking prices for second quarter. Shipments on contracts continue active, and consumption proportionately heavy.

Occasionally spot orders are placed for filling in, the total of such sales being fairly large. A slight scarcity of malleable is developing and some producers have advanced their asking price to \$18.25, at which some small lots have been placed. Sellers claim all bessemer orders are being booked at \$18.25. Basic continues quiet and nominal at \$1.

Delivery of pig iron at Birmingham continues slow, consumers indicating they have no desire to carry surplus material on their yards. Spot sales have fallen off. Furnace interests still have considerable unfilled tonnage. The current price is \$16.50 to \$17, base, Birmingham. No advance is intimated for second quarter.

Pig iron buying for second quarter at Chicago is acquiring real momentum, although orders are being placed in a quiet way.

The market is firm at \$20, base, Chicago. Furnaces have good order books for delivery through May and June.

A number of inquiries for 1,000 to 1,800 tons have appeared. An order for 1,000 tons was placed by a buyer in northeastern Illinois.

Consumption of nonferrous metals is running at top notch. This fact is made plain in statistics on copper and tin, and while current figures are not available on nickel and aluminum, conditions appear similar. Shipments of lead are about as large as ever before, and shipments of zinc are unusually heavy for this season.

Prices of most metals were unchanged in the past week but tin declined.

Quotations on brass and copper mill products, like copper, also were unchanged. Big shipments still are maintained, and mills are running at the highest rates in years. Their capacity is larger than ever before, so actual output exceeds that of any time past. Mills are heavily booked with orders through March, but much new buying for shipment in the next two months also is expected.

### COPPER

Sales in the past week were light, both domestic and export, although the latter picked up somewhat in the past day or two. Most domestic business was for shipment in May but some was for earlier delivery. Statistics for this month are expected to be strong on account of large shipments being made to all refineries. Output is remaining practically unchanged.

### TIN

Buying by users has been moderate, but some metal for scattered positions has been sold every day. The price eased off for several days after having exceeded 50.00c early in the month. Over the week-end it dropped to 49.00c.

### ZINC

Prime western has continued to sell at 6.35c, E. St. Louis, but the ore market went up \$1 last week to \$41 a ton, and so it is thought in the metal market that slab zinc will rise quickly.

Most of the sales of zinc lately have been for shipment several months ahead, but it appears there still is much to buy for early positions. Shipments of high grade continue very large but the price is unchanged.

### LEAD

Buying has been active and producers are well sold, so that the market is in a strong position and prices higher.

# Chicago Warehouse Metal and Furnace Supply Prices

AMERICAN ARTISAN is the only publication containing Western  
Metal, Furnace Supply and Hardware prices corrected weekly

## METALS

### PIG IRON

Chicago Fdy.,	
No. 2	\$20 00
Southern Fdy. No. 2	23 01
Lake Superior Charcoal	27 04
Malleable	30 00

### FIRST QUALITY BRIGHT CHARCOAL TIN PLATES

IC	20x28 112 sheets	\$22 50
IX	20x28	25 50
IXX	20x28 56 sheets	14 50
IXXX	20x28	15 50
IXXXX	20x28	17 00

### TERNE PLATES

IC	20x28, 40-lb. 112 sheets	\$26 70
IX	20x28, 40-lb. 112 sheets	29 70
IC	20x28, 25-lb. 112 sheets	22 20
IX	20x28, 25-lb. 112 sheets	25 20
IC	20x28, 20-lb. 112 sheets	20 25
IV	20x28, 20-lb. 112 sheets	23 00

### "ARMCO" INGOT IRON PLATES

No. 8 ga.—100 lbs.	\$4 15
3/16 in.—100 lbs.	4 05
1/4 in.—100 lbs.	3 85

### COKE PLATES

Cokes, 80 lbs., base, 20x28	\$12 00
Cokes, 90 lbs., base, 20x28	12 20
Cokes, 100 lbs., base, 20x28	12 40
Cokes, 107 lbs., base, IC	
20x28	12 75
Cokes, 135 lbs., base, IX	
20x28	14 75
Cokes, 155 lbs., base, IX	
56 sheets	8 50
Cokes, 175 lbs., base, IX	
56 sheets	9 35
Cokes, 195 lbs., base, IX	
56 sheets	10 25

Base 10 ga.—per 100 lbs.	\$3 35
"Armco" 10 ga.—per 100 lbs.	4 15

### ONE PASS COLD ROLLED BLACK

No. 18-20	per 100 lbs.	\$3 60
No. 22	per 100 lbs.	3 75
No. 24	per 100 lbs.	3 80
No. 26	per 100 lbs.	3 90
No. 27	per 100 lbs.	3 95
No. 28	per 100 lbs.	4 05
No. 29	per 100 lbs.	4 20
No. 30	per 100 lbs.	4 30

### "ARMCO" GALVANIZED

"Armco" 24....per 100 lbs.	\$6 15
----------------------------	--------

### GALVANIZED

No. 16	per 100 lbs.	\$4 15
No. 18	per 100 lbs.	4 30
No. 20	per 100 lbs.	4 45
No. 22	per 100 lbs.	4 50
No. 24	per 100 lbs.	4 55
No. 26	per 100 lbs.	4 90
No. 27	per 100 lbs.	5 00
No. 28	per 100 lbs.	5 15
No. 30	per 100 lbs.	5 55

### BAR SOLDER

Warranted	
50x50	per 100 lbs. \$31 00
Commercial	
45-55	per 100 lbs. 23 50
Plumbers	per 100 lbs. 26 00

### ZINC

In Slabs	\$ 7 25
SHEET ZINC	
Cask Lots (600 lbs.)	\$11 25
Sheet Lots	12 25

### BRASS

Sheets, Chicago Base	23 1/2 c
Mill base	22 1/2 c
Tubing, brazed base	27 1/2 c
Wire, base	23 c
Rods, base	20 1/4 c

### COPPER

Sheets, Chicago base	27 1/2 c
Mill base	26 1/2 c
Tubing, seamless base	28 1/2 c
Wire, plain rd., 8 B. & S. Ga.	
and heavier	24 1/2 c

## LEAD

American Pig	\$7 50
Bar	8 50

## TIN

Pig Tin	per 100 lbs. \$53 00
Bar Tin	per 100 lbs. 50 00

## HARDWARE, SHEET METAL SUPPLIES, WARM AIR FURNACE FITTINGS AND ACCESSORIES.

### ASBESTOS

Paper up to 1/16.....	6c per lb.
Roll board .....	6 1/2 c per lb.
Mill board 3/32 to 1/4.....	6c per lb.
Corrugated Paper (250	
sq. ft. to roll).....	\$6 00 per roll

### BRUSHES

Furnace Pipe Cleaning	
Bristle with handle each	\$0 75
Flue Cleaning	
Steel only, each	1 25

### CEMENT, FURNACE

American Seal, 5-lb. cans, net	\$ 45
American Seal, 10-lb. cans, net	85
American Seal, 25-lb. cans, net	2 25
Pecora	per 100 lbs. 7 50

### CHIMNEY TOPS

Adams' Revolving	
Wt. Doz.	Price Doz.
4 in.....	21 lbs. \$11 00
6 in.....	24 lbs. 11 50
7 in.....	30 lbs. 13 50
8 in.....	33 lbs. 15 00
9 in.....	51 lbs. 16 50
10 in.....	56 lbs. 18 00
12 in.....	66 lbs. 22 00
14 in.....	110 lbs. 36 00

### CLINKER TONGS

Each	\$1 50
------	--------

### CLIPS

Damper	
No-Rivet Steel, with tail	
pieces, per gross.....	\$9 50
Rivet Steel, with tail	
pieces, per gross.....	7 50
Tail pieces, per gross.....	2 40

### COPPERS—Soldering Pointed Roofing

3 lb. and heavier.....	per lb. 40c
2 1/2 lb. ....	per lb. 45c
2 lb. ....	per lb. 48c
1 1/2 lb. ....	per lb. 55c
1 lb. ....	per lb. 60c

### CORNICE BRAKES

Chicago Steel Bending	
Nos. 1 to 6B.....	Net

### CUT-OFFS

Gal., plain, round or cor. rd.	
26 gauge .....	30%
28 gauge .....	35%

### DAMPERS

"Yankee" Hot Air	
7 inch, each 20c, doz.....	\$1 60
8 inch, each 25c, doz.....	2 20
9 inch, each 30c, doz.....	3 60
10 inch, each 32c, doz.....	3 80
Smoke Pipe	
7 inch, doz.....	\$1 60
8 inch, doz.....	2 20
9 inch, doz.....	3 00
10 inch, doz.....	3 75
12 inch, doz.....	4 50

### ADAMS No. 1 CHECK

Check and Collar Complete	
8 inch, each.....	3 00
9 inch, each.....	3 25
End Check Only	
8 inch, each.....	1 60
9 inch, each.....	1 85
Collar Only	
8 inch, each.....	50
9 inch, each.....	65

### No. 2 CHECK

8 inch, each.....	1 00
9 inch, each.....	1 00
10% Disc. on Adams No. 1	
and No. 2 Check	
Diamond Smoke Pipe	
7 inch, doz.....	\$2 00
8 inch, doz.....	3 20
9 inch, doz.....	4 80
10 inch, doz.....	6 00

## Adams' Sheet Metal

7 inch, doz.....	\$1 60
8 inch, doz.....	2 20
9 inch, doz.....	2 60
10 inch, doz.....	3 80
12 inch, doz.....	3 50
14 inch, doz.....	5 00

## EAVES TROUGH

Galv. Crimpedge, crated 75 & 10%	
Zinc, "Barnes" .....	60%

## ELBOWS

Conductor Pipe	
Galv. plain or corrugated,	
round flat Crimp,	
28 Gauge .....	60%
26 Gauge .....	45%
24 Gauge .....	15%

## Galv. Terne Steel

Plain Rd. and Rd. Corr.:	
28 Ga. ....	60%
26 Ga. ....	45%
24 Ga. ....	15%

## Square Corrugated

No. 28 Gauge .....	50%
26 Gauge .....	35%

## Fortico Elbows

Standard Gauge Conductor Pipe,	
plain or corrugated.	
Not nested .....	70 & 5%
Nested Solid .....	70 & 5%

## Sq. Corr., A. & B. & Octagon

28 Ga. ....	50%
26 Ga. ....	35%

## Fortico

1", 1 1/4", 1 1/2".....	45%
-------------------------	-----

## Copper

16 oz., all designs.....	50%
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## Zinc—

All styles .....	60%
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## ELBOWS—Stove Pipe

1-piece Corrugated, Uniform Blue	
"Milcor" No. 28 Gauge. Doz.	
5-inch .....	\$1 15
6-inch .....	1 25
7-inch .....	1 75

## Special Corrugated

6-inch .....	\$1 00
7-inch .....	1 60

## Adjustable—Uniform Blue

"Milcor" No. 28 Gauge. Uniform	
Blue.	
5-inch .....	\$1 60
6-inch .....	1 75
7-inch .....	2 10

## WOOD FACES—50% off list.

## FENCE

726-6-12 1/4 (100 rods)...	\$28 68
1948-6-14 1/4 (100 rods)...	43 62

## FILES AND RASPS

Heller's (American) .....	50-10%
American .....	60-10%
Arcade .....	50%
Black Diamond .....	50%
Eagle .....	50%
Great Western .....	50%
Kearney & Foot.....	50%
McClellan .....	50%
Nicholson .....	50%
Simonds .....	60%

## FIRE POTS

Geo. W. Diener Mfg. Co.	Ma.
No. 92 Gasoline Torch, 1	
qt. ....	\$ 5 13
No. 9250, Kerosene, or	
Gasoline Torch, 1 qt....	6 50
No. 10 Tinner's Furn.	
Square tank, 1 gal.....	11 30
No. 15 Tinner's Furn.	
Round tank, 1 gal.....	10 70
No. 21 Gas Soldering Fur-	
nace .....	8 60
No. 110 Automatic Gas	
Soldering Furnace ....	10 50

Quick Meal Stove Co.	
Vesuvius, F. O. B. St. Louis	30%
(Extra Dist. for large	
quantities.)	

## GALVANIZED WARE

Pails (Galv. after made),	
10-qt. ....	\$2 00
Tubs (Galv. after made).	
No. 1 .....	5 75
No. 2 .....	6 50

## GLASS

Single Strength, A, all	
brackets .....	37%
Single Strength, B, all	
brackets .....	38-5%
Double Strength, A, all	
brackets .....	37%
Double Strength, B, all	
brackets .....	38-5%

## HANGERS

Conductor Pipe	
Milcor Perfection Wire.....	35%
Milcor Triplex Wire.....	10%
Eaves Trough	
Milcor Steel (galv. after	
forming) List .....	plus 13 1/4%
Milcor Selflock E. T. Wire,	
List .....	plus 50%

## HOOKS

Conductor	
"Direct Drive" Wrought	
Iron for wood or brick..	15%

## HUMIDIFIER

"Front-Rank," Automatic	
In single lots.....	50%
In lots of 10 or more....	55-5%
In lots of 25 or more....	50-10%
Vapor pans, etc., each....	50%

## LIFTERS

Stove Cover	
Coppered .....	per gro. \$8 00
Alaska .....	per gro. 4 75

## MALLETS

Tinners	
Hickory .....	per doz. \$3 25

## MITRES

Galvanized steel mitres	
28 Ga. ....	70
26 Ga. ....	60-30

## NAILS

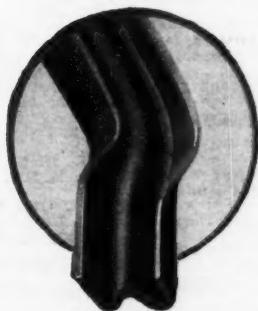
Cut Steel, base .....	\$4 00
Wire	
Common .....	\$3 10
Cement Coated .....	3 10

(Continued on page 164)





The double channel in the bend of the shank increases the strength 50 per cent over any other type of No. 12 Shank



This bead clip holds the gutter absolutely tight without solder and is Udyllite rust proof coated—no raw edges to rust out and fail you in a few years



Here's the lock of security. The Circle cannot loosen and sag the gutter, even though the bolt through the Shank becomes loose. All the weight is taken by the Shank

**THIS  
NEW**

# Lupton <sup>M</sup>/<sub>R</sub> HANGER, CARRIES THE LOAD!

**S**HEET metal men tell us the new Lupton M-R Hanger is the best they've ever used.

The outstanding characteristics of this Shank and Circle are its strength and convenience—both the result of correct design. Note the three long bearing surfaces where Circle joins Shank. The bolt serves only to connect the two, while the load is carried by the contact of the bearing surfaces. Gutter hung on M-R Hangers will withstand any load of water, ice, or snow that can fall onto it and, the heavier the load the more rigid the Hangers become. The rust-proofed bead clips used with M-R Hangers ensure a tight, neat job without soldering and with a considerable saving of labor.

Lupton Shanks and Circles run absolutely uniform in size and are made in single or double bead Circles; all types of Shanks in plain Steel, Udyllite Rustproof Coated Steel and Copper. You can get Lupton Hangers from your jobber. Try them out on your next job.

DAVID LUPTON'S SONS COMPANY  
Allegheny Ave. & Tulip St., Philadelphia



Patent  
Applied  
For

When writing mention AMERICAN ARTISAN—Thank you!

# BUYERS' DIRECTORY

**Asbestos Liquid.**  
B. & F. Mfg. Co., Des Moines, Ia.  
**Acetylene (Gas) Dissolved.**  
Prest-O-Lite Co., Inc.,  
New York, N. Y.

**Benchies—Steel**  
Maplewood Machinery Co.,  
Chicago, Ill.

**Bolts—Stove.**  
The Kirk-Latty Co.,  
Cleveland, Ohio  
**Lamson & Sessions Co.,**  
Cleveland, Ohio  
**Ryerson & Son, Inc.,** Jos. T.,  
Chgo., N. Y., St. L., Det., Cleve.

**Brakes—Bending.**  
Dreis & Krump Mfg. Co.,  
Chicago, Ill.  
**Ryerson & Son, Inc.,** Jos. T.,  
Chgo., N. Y., St. L., Det., Cleve.

**Brakes—Cornice.**  
Dreis & Krump Mfg. Co.,  
Chicago, Ill.

**Brass and Copper.**  
American Brass Co.,  
Waterbury, Conn.  
Copper & Brass Research As-  
sociation, New York

**Cans—Garbage.**  
Osborn Co., The J. M. & L. A.,  
Cleveland, Ohio

**Castings—Malleable.**  
Fanner Mfg. Co., Cleveland, Ohio

**Ceilings—Metal.**  
Friedley-Voshardt Co.,  
Chicago, Ill.  
Milwaukee Corrugating Co.,  
Mil., Ch'go, La Crosse, Kan. City  
Wheeling Corrugating Co.,  
Wheeling, W. Va.

**Chaplets.**  
Fanner Mfg. Co., Cleveland, Ohio

**Chimney Tops.**  
Standard Ventilator Co.,  
Lewisburg, Pa.

**Clinker Tongs.**  
L. J. Mueller Furnace Co.,  
Milwaukee, Wis.  
Stover Mfg. & Engine Co.,  
Freeport, Ill.

**Copper.**  
American Brass Co.,  
Waterbury, Conn.  
Copper & Brass Research As-  
sociation, New York  
**Cornices.**  
Friedley-Voshardt Co.,  
Chicago, Ill.  
Milwaukee Corrugating Co.,  
Mil., Ch'go, La Crosse, Kan. City

**Cutting Blowpipes.**  
Oxweld Acetylene Co.,  
New York, N. Y.

**Cut-offs—Rain Water.**  
Milwaukee Corrugating Co.,  
Mil., Ch'go, La Crosse, Kan. City

**Dampers—Quadrants—Accessories.**  
Milwaukee Corrugating Co.,  
Mil., Ch'go, La Crosse, Kan. City  
L. J. Mueller Furnace Co.,  
Milwaukee, Wis.  
Parker-Kalon Corp.,  
New York, N. Y.  
Stover Mfg. & Engine Co.,  
Freeport, Ill.

**Damper Regulators.**  
National Regulator Co.,  
Chicago, Ill.  
H. M. Sheer Co.,  
Quincy, Ill.  
Thermo-Control Regulator Co.,  
Youngstown, Ohio

**Dies—Punch & Press.**  
La Salle Machine Works,  
Chicago, Ill.

**Diffuser—Air Duct.**  
Aeolus-Dickinson Co., Chicago, Ill.  
L. J. Mueller Furnace Co.,  
Milwaukee, Wis.

**Doors—Metal.**  
Lupton's Sons Co., David,  
Philadelphia, Pa.

**Drive Screws—Hardened Metallic.**  
Parker-Kalon Corp.,  
200 Varick St., New York

**Eaves Trough.**  
Barnes Metal Products Co.,  
Chicago, Ill.  
Berger Bros. Co.,  
Philadelphia, Pa.  
Berger Co., L. D.,  
Philadelphia, Pa.  
Lupton's Sons Co., David,  
Philadelphia, Pa.  
Milwaukee Corrugating Co.,  
Mil., Ch'go, La Crosse, Kan. City  
New Jersey Zinc Sales Co., The,  
New York, N. Y.  
Wheeling Corrugating Co.,  
Wheeling, W. Va.

**Elbows and Shoes—Conductor.**  
Barnes Metal Products Co.,  
Chicago, Ill.  
Dieckmann Co., Ferdinand,  
Cincinnati, Ohio  
Lupton's Sons Co., David,  
Philadelphia, Pa.  
Milwaukee Corrugating Co.,  
Mil., Ch'go, La Crosse, Kan. City

**Wood Faces—Warm Air.**  
Auer Register Co., Cleveland, Ohio  
American Wood Register Co.,  
Plymouth, Ind.  
Milwaukee Corrugating Co.,  
Mil., Ch'go, La Crosse, Kan. City

**Fittings—Conductor.**  
Barnes Metal Products Co.,  
Chicago, Ill.  
Dieckmann Co., Ferdinand,  
Cincinnati, Ohio  
Lupton's Sons Co., David,  
Philadelphia, Pa.  
Milwaukee Corrugating Co.,  
Mil., Ch'go, La Crosse, Kan. City

**Flanges.**  
Chicago Metal Mfg. Co.,  
Chicago, Ill.

**Fittings—Steel Pipe.**  
Chicago Metal Mfg. Co.,  
Chicago, Ill.

**Flue Thimbles.**  
Milwaukee Corrugating Co.,  
Mil., Ch'go, La Crosse, Kan. City

**Furnace Cement—Asbestos.**  
Connors Paint Mfg. Co., Wm.,  
Troy, N. Y.  
Milwaukee Corrugating Co.,  
Mil., Ch'go, La Crosse, Kan. City

**Furnace Cement—Liquid.**  
Technical Products Co.,  
Pittsburgh, Pa.

**Furnace Cleaners—Suction.**  
Brillion Furnace Co., Brillion, Wis.  
**Furnace Coloring (Enamel).**  
B & F Mfg. Co., Des Moines, Iowa

**Furnace Fans.**  
A-C Mfg. Co., Pontiac, Ill.  
Canton Furnace & Mfg. Co.,  
Canton, Ohio  
A. H. Robinson Co.,  
Massillon, Ohio  
Warm Air Furnace Fan Co.,  
The, Cleveland, Ohio  
Williamson Heater Co.,  
Cincinnati, Ohio

**Furnace Fuse.**  
National Regulator Co.,  
Chicago, Ill.

**Furnace Regulators.**  
National Regulator Co.,  
Chicago, Ill.  
H. M. Sheer Co.,  
Quincy, Ill.  
Thermo-Control Regulator Co.,  
Youngstown, Ohio

**Furnace Rings.**  
Forest City-Walworth Run  
Foundries Co., Cleveland, Ohio  
Milwaukee Corrugating Co.,  
Milwaukee, Wis.

**Furnaces—Gas.**  
Calkins & Pearce, Columbus, Ohio  
Mueller Furnace Co., L. J.,  
Milwaukee, Wis.

**Furnaces—Warm Air**  
Agricola Furnace Co.,  
Gadsden, Ala.  
American Furnace Co.,  
St. Louis, Mo.  
Beckwith Co., The,  
Dowagiac, Mich.  
Brillion Furnace Co., Brillion, Wis.  
Canton Furnace & Mfg. Co.,  
Canton, Ohio  
Colburn Heater Co., Chicago, Ill.  
Dowagiac Steel Furnace Co.,  
Dowagiac, Mich.  
Emrich Co., C., Columbus, Ohio  
Farris Furnace Co.,  
Springfield, Ill.

**Floral City Heater Co.,**  
Monroe, Mich.  
Forest City-Walworth Run Fdy.,  
Cleveland, Ohio  
Fox Furnace Co., Elyria, Ohio  
Hall-Neal Furnace Co.,  
Indianapolis, Ind.

Henry Furnace & Fdy. Co.,  
Cleveland, Ohio  
Hess-Snyder Co., Massillon, Ohio  
Homer Furnace Co.,  
Coldwater, Mich.  
Lennox Furnace Co.,  
Marshalltown, Ia.; Syracuse, N. Y.  
Liberty Foundry Co.,  
St. Louis, Mo.  
Magirl Foundry & Furnace Co.,  
P. H., Bloomington, Ill.  
May-Fieberger Furnace Co.,  
Newark, Ohio  
Marshall Furnace Co.,  
Marshall, Mich.  
Meyer Furnace Co., The, Peoria, Ill.  
Midland Furnace Co.,  
Columbus, Ohio  
Mt. Vernon Furnace & Mfg. Co.,  
Mt. Vernon, Ill.  
Mueller Furnace Co., L. J.,  
Milwaukee, Wis.  
Oakland Foundry Co.,  
Belleville, Ill.  
Peerless Foundry Co.,  
Indianapolis, Ind.  
Premier Warm Air Heater Co.,  
Dowagiac, Mich.  
Richardson & Boynton Co.,  
New York, N. Y.  
Robinson Co., A. H.,  
Massillon, Ohio  
Robinson Furnace Co.,  
Chicago, Ill.  
Rybolt Heater Co., Ashland, Ohio  
Schwab & Sons Co., R. J.,  
Milwaukee, Wis.  
St. Louis Heating Co.,  
St. Louis, Mo.  
Standard Furnace & Supply Co.,  
Omaha, Neb.  
Standard Foundry & Furnace Co.,  
De Kalb, Ill.  
Success Heater Mfg. Co.,  
Des Moines, Ia.  
Thatcher Co.,  
Chicago, Ill.  
XXth Century Heating & Vent-  
ilating Co., Akron, Ohio  
Waterman-Waterbury Co.,  
Minneapolis, Minn.  
Western Steel Products Co.,  
Duluth, Minn.  
Williamson Heater Co.,  
Cincinnati, Ohio  
Wise Furnace Co.,  
Akron, Ohio

**Gas (Acetylene) Dissolved.**  
Prest-O-Lite Co., Inc.,  
New York, N. Y.

**Gas (Nitrogen).**  
Linde Air Products Co.,  
New York, N. Y.

**Gas (Oxygen).**  
Linde Air Products Co.,  
New York, N. Y.

**Glass—Wire.**  
Lupton's Sons Co., David,  
Philadelphia, Pa.

**Grilles.**  
Auer Register Co., Cleveland, Ohio  
Harrington & King Perforating  
Co., Chicago, Ill.  
Hart & Cooley Co.,  
New Britain, Conn.  
Independent Reg. Co.,  
Cleveland, Ohio  
Tuttle & Bailey Mfg. Co.,  
Chicago, Ill.

**Grilles—Stove Front.**  
Tuttle & Bailey Mfg. Co.,  
Chicago, Ill.

**Guards—Machine and Belt.**  
Harrington & King Perforating  
Co., Chicago, Ill.

**Handles—Boiler.**  
Berger Bros. Co., Philadelphia, Pa.

**Handles—Soldering Iron.**  
Hyro Mfg. Co., New York, N. Y.

**Hangers—Eaves Trough.**  
Berger Co., L. D., Philadelphia, Pa.  
Horan Stay Hanger Co.,  
Louisville, Ky.

**Lupton's Sons Co., David,**  
Philadelphia, Pa.  
Milwaukee Corrugating Co.,  
Mil., Ch'go, La Crosse, Kan. City

**Heat Hustlers**  
American Foundry & Furnace Co.,  
Bloomington, Ill.

**Heat Regulation Systems.**  
National Regulator Co.,  
Chicago, Ill.  
Thermo-Control Regulator Co.,  
Youngstown, Ohio

**Heaters—Cabinet.**  
Fox Furnace Co., Elyria, Ohio  
Mueller Furnace Co., L. J.,  
Milwaukee, Wis.  
Waterman-Waterbury Co.,  
Minneapolis, Minn.

**Heaters—School Room.**  
Floral City Heater Co.,  
Monroe, Mich.  
Meyer Furnace Co., The,  
Peoria, Ill.

**L. J. Mueller Furnace Co.,**  
Milwaukee, Wis.  
Standard Furnace & Supply Co.,  
Omaha, Neb.  
Waterman-Waterbury Co.,  
Minneapolis, Minn.

**Hooks—Conductor.**  
Berger Co., L. D.,  
Philadelphia, Pa.

**Hotels**  
Fort Shelby Hotel,  
Detroit, Mich.

**Humidifiers.**  
Automatic Humidifier Co.,  
Cedar Falls, Iowa  
Chandler Pump Co.,  
Cedar Rapids, Iowa  
L. J. Mueller Furnace Co.,  
Milwaukee, Wis.  
Salada Mfg. Co.,  
Minneapolis, Minn.

**Lath—Expanding Metal.**  
Milwaukee Corrugating Co.,  
Mil., Ch'go, La Crosse, Kan. City

**Machines—Crimping**  
Bertsch & Co.,  
Cambridge City, Ind.

**Machinery—Culvert.**  
Bertsch & Co.,  
Cambridge City, Ind.

**Machines—Tinsmith's.**  
Bertsch & Co.,  
Cambridge City, Ind.

**Dreis & Krump Mfg. Co.,**  
Chicago, Ill.  
Interstate Machinery Co.,  
Chicago, Ill.

**La Salle Machine Works,**  
Chicago, Ill.  
Maplewood Machinery Co.,  
Chicago, Ill.

**Marshalltown Mfg. Co.,**  
Marshalltown, Iowa  
Osborn Co., The J. M. & L. A.,  
Cleveland, Ohio

**Peck, Stow & Wilcox Co.,**  
Southington, Conn.  
Ryerson & Son, Inc., Jos. T.,  
Chgo., N. Y., St. L., Det., Cleve.

**Unishear Co.,**  
New York, N. Y.

**Mandrels.**  
Hyro Mfg. Co., New York, N. Y.

**Metals—Perforated.**  
Harrington & King Perforating  
Co., Chicago, Ill.

**Miters.**  
Friedley-Voshardt Co.,  
Chicago, Ill.

**Milwaukee Corrugating Co.,**  
Mil., Ch'go, La Crosse, Kan. City

**Miters—Eaves Trough.**  
Barnes Metal Products Co.,  
Chicago, Ill.

**Lupton's Sons Co., David,**  
Philadelphia, Pa.  
Milwaukee Corrugating Co.,  
Mil., Ch'go, La Crosse, Kan. City

**Nails—Hardened Masonry.**  
Parker-Kalon Corp.,  
New York, N. Y.

**Nitrogen (Gas).**  
Linde Air Products Co.,  
New York, N. Y.

**Oil Burners.**  
McIlvaine Burner Corp.,  
Evanston, Ill.

**Ornaments—Sheet Metal.**  
Friedley-Voshardt Co.,  
Chicago, Ill.

**Geroch Bros. Mfg. Co.,**  
St. Louis, Mo.  
Milwaukee Corrugating Co.,  
Mil., Ch'go, La Crosse, Kan. City

**Oxygen (Gas).**  
Linde Air Products Co.,  
New York, N. Y.

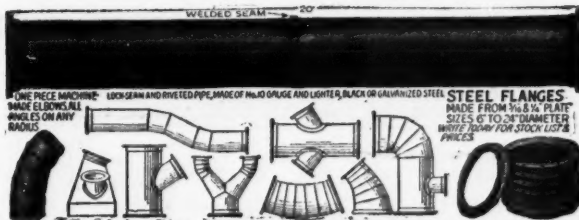
**Paint.**  
Connors Paint Mfg. Co., Wm.,  
Troy, N. Y.

**Patterns—Furnace and Stove.**  
Cleveland Castings Pattern Co.,  
Cleveland, Ohio  
Quincy Pattern Co., Quincy, Ill.  
Vedder Pattern Works,  
Troy, N. Y.

(Continued on page 168)



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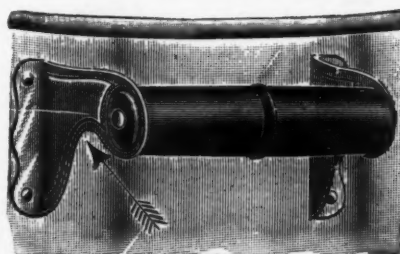


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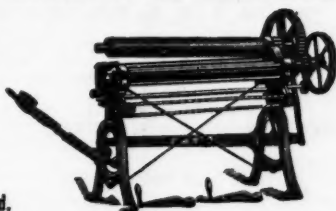
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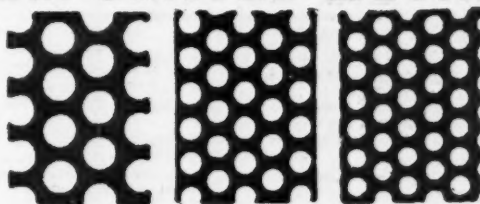
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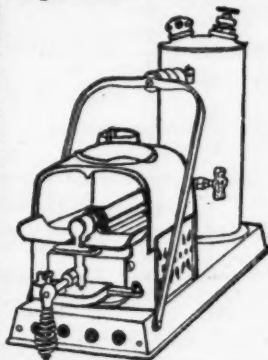


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# BUYERS' DIRECTORY

(Continued from page 166)

**Pipe and Fittings—Furnace.**  
Chicago Furnace Supply Co.,  
Chicago, Ill.  
Henry Furnace & Fdy. Co.,  
Cleveland, Ohio  
Lamneck Co., W. E.,  
Columbus, Ohio  
Meyer & Bro. Co., F., Peoria, Ill.  
Milwaukee Corrugating Co.,  
Mil., Ch'go, La Crosse, Kan. City  
Mueller Furnace Co., L. J.,  
Milwaukee, Wis.  
Peerless Foundry Co.,  
Indianapolis, Ind.  
Osborn Co., The J. M. & L. A.,  
Cleveland, Ohio  
Standard Furnace & Supply Co.,  
Omaha, Neb.

**Pipe and Fittings—Stove.**  
Meyer & Bro. Co., F., Peoria, Ill.  
Milwaukee Corrugating Co.,  
Mil., Ch'go, La Crosse, Kan. City

**Pipe—Conductor.**  
Barnes Metal Products Co.,  
Chicago, Ill.  
Berger Bros. Co.,  
Philadelphia, Pa.  
Chicago Metal Mfg. Co.,  
Chicago, Ill.  
Dieckmann Co., Ferdinand,  
Cincinnati, Ohio  
Friedley-Voshardt Co.,  
Chicago, Ill.

Lupton's Sons Co., David,  
Philadelphia, Pa.  
Milwaukee Corrugating Co.,  
Mil., Ch'go, La Crosse, Kan. City  
New Jersey Zinc Sales Co., The,  
New York, N. Y.  
Wheeling Corrugating Co.,  
Wheeling, W. Va.

**Presses.**  
La Salle Machine Works,  
Chicago, Ill.

**Punches.**  
Bertsch & Co.,  
Cambridge City, Ind.  
Interstate Machinery Co.,  
Chicago, Ill.  
La Salle Machine Works,  
Chicago, Ill.  
Peck, Stow & Wilcox Co.,  
Southington, Conn.  
Ryerson & Son, Inc., Jos. T.,  
Chgo., N. Y., St. L., Det., Cleve.

**Punches—Combination Bench and Hand.**  
Hyro Mfg. Co., New York, N. Y.  
Ryerson & Son, Inc., Jos. T.,  
Chgo., N. Y., St. L., Det., Cleve.

**Punches—Hand.**  
Hyro Mfg. Co., New York, N. Y.  
Ryerson & Son, Inc., Jos. T.,  
Chgo., N. Y., St. L., Det., Cleve.

**Patty—Stove.**  
Connors Paint Mfg. Co., Wm.,  
Troy, N. Y.

**Radiator Cabinets.**  
The Hart & Cooley Mfg. Co.,  
New Britain, Conn.  
Tuttle & Bailey Mfg. Co.,  
Chicago, Ill.

**Radiators—Shields.**  
Beh & Co., Inc., New York, N. Y.

**Ranges—Combination Gas & Coal.**  
Quick Meal Stove Co.,  
St. Louis, Mo.  
Thatcher Co.,  
Newark, N. J.

**Ranges—Gas.**  
Quick Meal Stove Co.,  
St. Louis, Mo.

**Register Shields.**  
Beh & Co., Inc., New York, N. Y.  
Hall-Neal Furnace Co.,  
Indianapolis, Ind.

**Registers—Warm Air.**  
Auer Register Co., Cleveland, Ohio  
Forest City-Walworth Run  
Foundries Co., Cleveland, Ohio  
Hart & Cooley Co.,  
New Britain, Conn.  
Henry Furnace & Fdy. Co.,  
Cleveland, Ohio  
Independent Register & Mfg. Co.,  
Cleveland, Ohio  
Lamneck & Co., W. E.,  
Columbus, Ohio

Meyer & Bro. Co., F., Peoria, Ill.  
Milwaukee Corrugating Co.,  
Mil., Ch'go, La Crosse, Kan. City  
Mueller Furnace Co., L. J.,  
Milwaukee, Wis.  
Rock Island Register Co.,  
Rock Island, Ill.  
Stearns Register Co.,  
Detroit, Mich.

Standard Furnace & Supply Co.,  
Omaha, Neb.  
Tuttle & Bailey Mfg. Co.,  
Chicago, Ill.  
United States Register Co.,  
Battle Creek, Mich.  
Waterloo Register Co.,  
Waterloo, Iowa

**Registers—Wood.**  
American Wood Register Co.,  
Plymouth, Ind.  
Auer Register Co., Cleveland, Ohio  
Milwaukee Corrugating Co.,  
Mil., Ch'go, La Crosse, Kan. City  
Mueller Furnace Co., L. J.,  
Milwaukee, Wis.

**Regulators—Heat.**  
National Regulator Co.,  
Chicago, Ill.  
H. M. Sheer Co.,  
Chicago, Ill.  
Thermo-Control Regulator Co.,  
Youngstown, Ohio

**Ridging.**  
Armco Distributors Ass'n of  
America, Middletown, Ohio  
Lupton's Sons Co., David,  
Philadelphia, Pa.  
Milwaukee Corrugating Co.,  
Mil., Ch'go, La Crosse, Kan. City

**Rivets—Stove.**  
The Kirk-Latty Co.,  
Cleveland, Ohio  
Lamson & Sessions Co.,  
Cleveland, Ohio  
Ryerson & Son, Inc., Jos. T.,  
Chgo., N. Y., St. L., Det., Cleve.

**Rods—Stove.**  
The Kirk-Latty Co.,  
Cleveland, Ohio  
Lamson & Sessions Co.,  
Cleveland, Ohio

**Rolls—Forming.**  
Bertsch & Co.,  
Cambridge City, Ind.

**Roofing Cement.**  
Connors Paint Mfg. Co., Wm.,  
Troy, N. Y.

**Roof—Flashing.**  
Milwaukee Corrugating Co.,  
Milwaukee, Wis.

**Roofing—Iron and Steel.**  
Armco Distributors Ass'n of  
America, Middletown, Ohio  
Central Alloy Steel Corp.,  
Massillon, Ohio  
Friedley-Voshardt Co.,  
Chicago, Ill.

Inland Steel Co.,  
Chicago, Ill.  
Milwaukee Corrugating Co.,  
Mil., Ch'go, La Crosse, Kan. City  
Osborn Co., The J. M. & L. A.,  
Cleveland, Ohio  
Ryerson & Son, Inc., Jos. T.,  
Chgo., N. Y., St. L., Det., Cleve.  
Wheeling Corrugating Co.,  
Wheeling, W. Va.

**Roofing—Tin.**  
Milwaukee Corrugating Co.,  
Mil., Ch'go, La Crosse, Kan. City  
Taylor Co., N. & G.,  
Philadelphia, Pa.

**Roofing—Zinc.**  
Wheeling Corrugating Co.,  
Wheeling, W. Va.

**Roofing Tools.**  
Wm. Elermann, Brooklyn, N. Y.  
**Roofing—Zinc.**  
New Jersey Zinc Sales Co., The,  
New York, N. Y.

**Rubbish Burners.**  
Hart & Cooley Co.,  
New Britain, Conn.

**Schools—Sheet Metal Pattern**

**Drafting.**  
St. Louis Technical Institute,  
St. Louis, Mo.

**Schools—Warm Air Heating.**  
St. Louis Technical Institute,  
St. Louis, Mo.

**Screws—Hardened Metallic Drive.**  
Milwaukee Corrugating Co.,  
Mil., Ch'go, La Crosse, Kan. City  
Parker-Kalon Corp.,  
200 Varick St., New York

**Screws—Hardened Self-Tapping, Sheet Metal.**  
Milwaukee Corrugating Co.,  
Mil., Ch'go, La Crosse, Kan. City  
Parker-Kalon Corp.,  
200 Varick St., New York

**Screens—Perforated Metal.**  
Harrington & King Perforating  
Co.,  
Chicago, Ill.

**Shears—Hand and Power.**  
Interstate Machinery Co.,  
Chicago, Ill.  
Marshalltown Mfg. Co.,  
Marshalltown, Iowa  
Peck, Stow & Wilcox Co.,  
Southington, Conn.  
Ryerson & Son, Inc., Jos. T.,  
Chgo., N. Y., St. L., Det., Cleve.  
Unishear Co., Inc.,  
New York, N. Y.  
Viking Shear Co.,  
Erie, Pa.

**Sheet Metal Screws—Hardened, Self-Tapping.**  
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**Sheets—Black and Galvanized.**  
Armco Distributors Ass'n of  
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Central Alloy Steel Corp.,  
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Inland Steel Co.,  
Chicago, Ill.  
Milwaukee Corrugating Co.,  
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Osborn Co., The J. M. & L. A.,  
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Chgo., N. Y., St. L., Det., Cleve.  
Taylor Co., N. & G.,  
Philadelphia, Pa.  
Wheeling Corrugating Co.,  
Wheeling, W. Va.

**Sheets—Iron.**  
Armco Distributors Ass'n of  
America, Middletown, Ohio  
Central Alloy Steel Corp.,  
Massillon, Ohio  
Milwaukee Corrugating Co.,  
Mil., Ch'go, La Crosse, Kan. City  
Ryerson & Son, Inc., Jos. T.,  
Chgo., N. Y., St. L., Det., Cleve.

**Sheets—Tin.**  
Taylor Co., N. & G.,  
Philadelphia, Pa.

**Sheets—Zinc.**  
New Jersey Zinc Sales Co., The,  
New York, N. Y.

**Shingles and Tiles—Metal.**  
Milwaukee Corrugating Co.,  
Mil., Ch'go, La Crosse, Kan. City  
Wheeling Corrugating Co.,  
Wheeling, W. Va.

**Sifters—Ash.**  
Diener Mfg. Co., G. W.,  
Chicago, Ill.

**Sky Lights.**  
Lupton's Sons Co., David,  
Philadelphia, Pa.  
Milwaukee Corrugating Co.,  
Mil., Ch'go, La Crosse, Kan. City

**Snaps.**  
Peck, Stow & Wilcox Co.,  
Southington, Conn.  
Ryerson & Son, Inc., Jos. T.,  
Chgo., N. Y., St. L., Det., Cleve.

**Solder.**  
Chicago Solder Co.,  
Chicago, Ill.  
Milwaukee Corrugating Co.,  
Mil., Ch'go, La Crosse, Kan. City

**Soldering Furnaces.**  
Burgess Soldering Furnace Co.,  
Columbus, Ohio  
Diener Mfg. Co., G. W.,  
Chicago, Ill.  
Quick Meal Stove Co.,  
St. Louis, Mo.  
Ryerson & Son, Inc., Jos. T.,  
Chgo., N. Y., St. L., Det., Cleve.

**Soldering Supplies.**  
Chicago Solder Co.,  
Chicago, Ill.

**Specialties—Hardware.**  
Diener Mfg. Co., G. W.,  
Chicago, Ill.

**Stars—Hard Iron Cleaning.**  
Fanner Mfg. Co., Cleveland, Ohio

**Statuary.**  
Friedley-Voshardt Co.,  
Chicago, Ill.  
Gerock Bros. Mfg. Co.,  
St. Louis, Mo.

**Steel Pipe—Welded.**  
Chicago Metal Mfg. Co.,  
Chicago, Ill.

**Stove Pipe Reducers.**  
Milwaukee Corrugating Co.,  
Mil., Ch'go, La Crosse, Kan. City

**Stoves—Camp.**  
Quick Meal Stove Co.,  
St. Louis, Mo.

**Stoves—Gasoline and Oil.**  
Quick Meal Stove Co.,  
St. Louis, Mo.

**Stoves and Ranges.**  
Quick Meal Stove Co.,  
St. Louis, Mo.  
Thatcher Co.,  
Newark, N. J.

**Tinplate.**  
Milwaukee Corrugating Co.,  
Mil., Ch'go, La Crosse, Kan. City  
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Taylor Co., N. & G.,  
Philadelphia, Pa.

**Tools—Roofers.**  
Wm. Elermann, Brooklyn, N. Y.

**Tools—TinSmith's.**  
Bertsch & Co.,  
Cambridge City, Ind.  
Dries & Krump Mfg. Co.,  
Chicago, Ill.  
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Maplewood Machinery Co.,  
Chicago, Ill.  
Osborn Co., The J. M. & L. A.,  
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Peck, Stow & Wilcox Co.,  
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Ryerson & Son, Inc., Jos. T.,  
Chgo., N. Y., St. L., Det., Cleve.  
Viking Shear Co.,  
Erie, Pa.

**Torches.**  
Burgess Soldering Furnace Co.,  
Columbus, Ohio  
Diener Mfg. Co., G. W.,  
Chicago, Ill.  
Quick Meal Stove Co.,  
St. Louis, Mo.  
Ryerson & Son, Inc., Jos. T.,  
Chgo., N. Y., St. L., Det., Cleve.

**Trade Extension.**  
Copper & Brass Research As-  
sociation, New York, N. Y.  
Sheet Steel Trade Extension  
Committee,  
Pittsburgh, Pa.

**Trimnings—Stove.**  
Fanner Mfg. Co., Cleveland, Ohio

**Ventilators.**  
Aeolus Dickinson Co., Chicago, Ill.  
Akrot Ventilators, Inc.,  
Chicago, Ill.  
Arex Company,  
Chicago, Ill.  
Berger Bros. Co.,  
Philadelphia, Pa.  
Friedley-Voshardt Co.,  
Chicago, Ill.  
Kernchen Co.,  
Chicago, Ill.  
Lupton's Sons Co., David,  
Philadelphia, Pa.  
Milwaukee Corrugating Co.,  
Mil., Ch'go, La Crosse, Kan. City  
Standard Ventilator Co.,  
Lewisburg, Pa.

**Ventilators—Ceiling.**  
Hart & Cooley Co.,  
New Britain, Conn.  
Henry Furnace & Fdy. Co.,  
Cleveland, Ohio

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## WANTS AND SALES

Yearly subscribers to the **AMERICAN ARTISAN** may insert advertisements of not more than fifty words in our Want and Sales Columns **WITHOUT CHARGE**.

Such advertisements, however, must be limited to help or situation wanted, tools or equipment for sale, to exchange or to buy, business for sale or location desired and must reach our office by Thursday of the week of publication. This privilege is not extended to manufacturers or jobbers—or those making a business of buying and selling used machines—employment agencies and brokers.

When sending advertisement state whether your name or blind number is to be used.

## BUSINESS CHANCES

**Lightning Rods**—Dealers who are selling **Lightning Protection** will make money by writing to us for our latest **Factory to Dealer Prices**. We employ no salesmen and save you all overhead charges. Our **Pure Copper Cable** and **Fixtures** are endorsed by the **National Board of Fire Underwriters** and hundreds of dealers. Write today for samples and prices. **L. K. Diddle Company, Marshfield, Wis.**

**FOR SALE**—Good, live, well stocked and equipped sheet metal business. Complete office equipment, extra good truck. All fresh, live-moving stock of wide range, including five furnaces on floor just now. Will lump off tools, truck and office furniture and invoice stock. Ill health prevents me from taking care of it properly. Address **S-492, AMERICAN ARTISAN, 620 S. Michigan Ave., Chicago, Ill.**

**For Sale** — Plumbing, heating and tin shop in one of the best towns in N. E. Nebraska. In business here 25 years and made money. Good stock. Want to retire on account of age and health. Will help any young man who is ambitious to keep the business going. Must be good mechanic. Address **J-491, AMERICAN ARTISAN, 620 S. Michigan Ave., Chicago, Ill.**

**For Sale**—Sheet metal business with new brick and tile building in good live So. Dakota town of 4,000, located in center of town with two-room modern apt.; municipal heat; full set of tools and the only shop in town. \$5,000 will take it, \$4,500 less tools. Address **P-492, AMERICAN ARTISAN, 620 S. Michigan Ave., Chicago, Ill.**

**FOR SALE**—In the best town in southwestern Minnesota, tin, plumbing and heating shop, tools and stock. Doing nice business but must quit on account of my health. Address **R-492, AMERICAN ARTISAN, 620 S. Michigan Ave., Chicago, Ill.**

**For Sale**—Half interest in plumbing and sheet metal shop in Minnesota town of 3,000. Not much money needed. This will bear investigation. Address **K-492, AMERICAN ARTISAN, 620 S. Michigan Ave., Chicago, Ill.**

Want to negotiate for a hardware business in western town five or ten thousand population. Address **H. J. Fueller, Glenside, Pa.** **W-492**

**Wanted to Buy**—Plumbing, heating and sheet metal shop in good Illinois town. Address **G-491, AMERICAN ARTISAN, 620 S. Michigan Ave., Chicago, Ill.**

## BUSINESS CHANCES

**Wanted**—Information of a good location for tin and furnace shop in a town of from 2,000 to 8,000 anywhere, or will trade good suburban lot and nice four-room house for shop or small hardware store. Want to locate soon. Address **J. M. Erpelding, R. F. D. 3, Decatur, Ill.** **L-492**

**For Sale Cheap**—Good paying furnace and sheet metal shop established 15 years. Town of 80,000, about 40 miles from Chicago. Selling on account of owner's health. Address **K-491, AMERICAN ARTISAN, 620 S. Michigan Ave., Chicago, Ill.**

**FOR SALE**—Three styles of heater patterns, wood and metal, for oval radiant heaters, very reasonable. Address **T-492, AMERICAN ARTISAN, 620 S. Michigan Ave., Chicago, Ill.**

**For Sale** — Well established hardware business in Shelby County, Sidney, Ohio. For further information write **Mrs. W. B. Taylor, Sr., Owner. Business Phone 201, residence 767R.** **H-491**

## SITUATION WANTED

**Plumber, sheet metal worker, pattern maker and expert in heating of all kinds wants position.** Can manage shop and men. Prefer town of 3,000 and over. Married, strictly sober and twenty years' experience. I will guarantee all my work. Will work on a commission basis also. State wages in first letter. Address **O-492, AMERICAN ARTISAN, 620 S. Michigan Ave., Chicago, Ill.**

**Tinner and furnace installer wants position with live hardware store in small town in Middle West.** Can figure, lay out, cut own patterns and make up all fittings. Neat, fast and competent. Can also do ordinary house plumbing. Want steady work more than big wages. Address **Z-491, AMERICAN ARTISAN, 620 S. Michigan Ave., Chicago, Ill.**

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## SITUATION WANTED

**Wanted**—Steady position with reliable concern by one who knows the furnace and sheet metal business. Can draft patterns and read blue prints. Capable of running shop; 38 years of age, married, sober and reliable. Will accept position as clerk or salesman where this knowledge is essential. Address **D-493, AMERICAN ARTISAN, 620 S. Michigan Ave., Chicago, Ill.**

**First-class tinner and furnace man, experienced at laying out, engineering, furnace work, shop and outside work, wants position.** City and country town experience. 20 years' experience. Age 35. Good habits. Would consider small shop on salary and commission basis. State full particulars. Address **J. D. Grace, Elmer, Mo.** **B-492**

**Live wire furnace salesman well acquainted with all furnace dealers in Illinois will be open for new connection March 1st.** Would like to hear from any reliable furnace company. Prefer Illinois but will consider other territory. Address **B-493, AMERICAN ARTISAN, 620 S. Michigan Ave., Chicago, Ill.**

**Situation wanted by an all around capable sheet metal worker.** Lay out, assemble and erect any branch of same. Work from blue prints. Married, best of health, capable of taking charge of shop and not afraid of work. Address **F-492, AMERICAN ARTISAN, 620 S. Michigan Ave., Chicago, Ill.**

**Situation wanted by young married man.** Good tinner, furnace and roofing man. Fair experience in plumbing and heating. Sober and reliable. Very reasonable wages. Address **A-492, AMERICAN ARTISAN, 620 S. Michigan Ave., Chicago, Ill.**

**A-1 sheet metal worker and estimator and layout man, middle aged, wants steady job.** Experienced in cornice, skylight, heating and ventilating and blow-pipe. Please state working conditions. Address **A-493, AMERICAN ARTISAN, 620 S. Michigan Ave., Chicago, Ill.**

**Situation wanted by all-around man with 28 years' experience in tinning, plumbing, steel ceilings and all kinds of heating, etc.** Want position in Wisconsin or northern Illinois. Address **C-493, AMERICAN ARTISAN, 620 S. Michigan Ave., Chicago, Ill.**

**Situation Wanted**—By first-class tinner and furnace man. Can solicit, estimate and lay out work. Married, strictly sober and reliable. Can come at once. Address **D-492, AMERICAN ARTISAN, 620 S. Michigan Ave., Chicago, Ill.**

**Position wanted as tinner and plumber in town with good schools.** A-1 on warm air furnace work; sober and steady and have 30 years of experience. Address **Z-492, AMERICAN ARTISAN, 620 S. Michigan Ave., Chicago, Ill.**

**Sheet Metal Worker**—Thoroughly experienced pattern cutter and foreman on all classes of general sheet metal work wants steady position with reliable company. Address **Y-491, AMERICAN ARTISAN, 620 S. Michigan Ave., Chicago, Ill.**

**Sheet metal estimator, practical sheet metal worker and layout man with good technical education wants position.** No job is too big to estimate. Address **E-492, AMERICAN ARTISAN, 620 S. Michigan Ave., Chicago, Ill.**

**Situation wanted by first-class sheet metal worker and furnace installer.** Michigan or adjoining states preferred. Married, sober and can furnish best of references. Address **B. J. Hawkins, 117 Galusha St., Owosso, Mich.** **C-492**

**Sheet metal, plumbing and heating man wants good job.** All references. Code installer. Married and can go to work any time. Address **M-492, AMERICAN ARTISAN, 620 S. Michigan Ave., Chicago, Ill.**



## HELP WANTED

Wanted—A1 man as foreman for progressive shop in central Illinois town of over 12,000. This concern has been in business over 35 years. The man we want must be first-class in laying out and installing everything in the sheet metal and furnace work. Must be able to handle men. Will pay \$50 a week and commission to right man the year around. No lost time. We need this man at once. Give full particulars in strict confidence. Address X-491, AMERICAN ARTISAN, 620 S. Michigan Ave., Chicago, Ill.

Wanted—Thoroughly experienced worker for gutter, furnace and sheet metal work. Must be able to answer all calls of service. If not experienced do not answer, as none but experienced man will do. Address Carl Weber, Foreman, Schwicker's Sheet Metal Shop, Mankato, Minn. T-491

Wanted—First-class plumber and tinner, married, and must be sober and reliable and able to take charge of shop, handle men and do estimating. Address H-492, AMERICAN ARTISAN, 620 S. Michigan Ave., Chicago, Ill.

Wanted — Reliable roofer and sheet metal worker for inside and outside work. Must be able to lay out own work with skill and neatness, also read blue prints. Fast growing shop in Cincinnati, Ohio. Address W-491, AMERICAN ARTISAN, 620 S. Michigan Ave., Chicago, Ill.

## TINNERS' TOOLS

For Sale—Complete set of tinner's tools, including 10-ft. double truss brake and 30-in. P. S. & W. foot power square shears, also safe, desk, typewriter and ¼-ton truck; also some stock. Cheap. Call or write at once to John Zingsheim, Shawano, Wis. R-491

For Sale—No. 502 Pexto grooving machine, \$15; No. 556 Pexto setting down machine, \$10; 2x31 Pexto forming rolls, \$10. All in good working order. Address G. W. Meisenholder, Parkston, S. D. J-492

For Sale—Tinner's tools, complete set standard P. S. W. Will sell at half price, or will sell any part of set. Address Wm. A. Meyer, 513 Valley St., Minot, N. D. O-491

For Sale—One No. 40 Bieber threading machine, one year old and in perfect condition. Address Huettman & Federspiel Hardware Co. Store, Port Washington, Wis. Y-492

Wanted to Buy—One second-hand steel cornice brake with cornice attachments. One second-hand throatless shear. Give description and state price. Address L-491, AMERICAN ARTISAN, 620 S. Michigan Ave., Chicago, Ill.

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For Sale—One 30-inch Niagara square shear in A1 condition. First check for \$50 takes it, f. o. b. Pekin, Ill. Address Walter A. Sargent, Pekin, Ill. S-491

For Sale—Full set of tinner's tools and auto radiator outfit. Address Charles Miller, 522 N. Niel St., Champaign, Ill. X-492

For Sale Cheap—1 pair 30-inch squaring shears. Address W. S. Dodge, Nevada, Iowa. M-491

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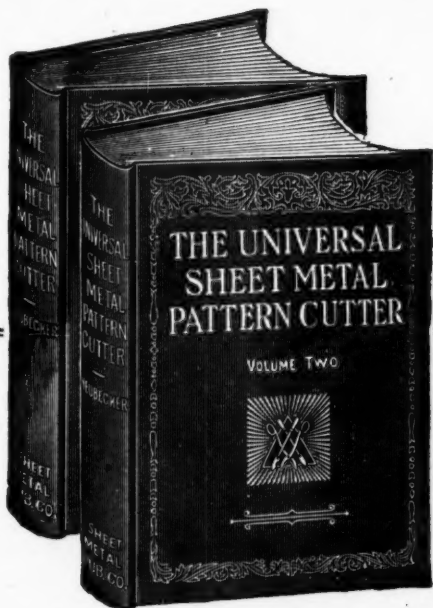
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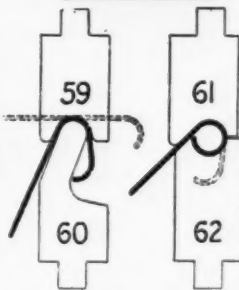
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